Northern Pacific uses a computer for **'measuring' clearances** of over-sized cargo . . . . . p. 18

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May 10, 1965

RAILWAY AGE WEEKLY

WORK RULES

Division superintendents tell how they affect:

- **Efficiency**
- **Morale**
- **Overtime**
- **Union relations**
- **Operations**

p. 10

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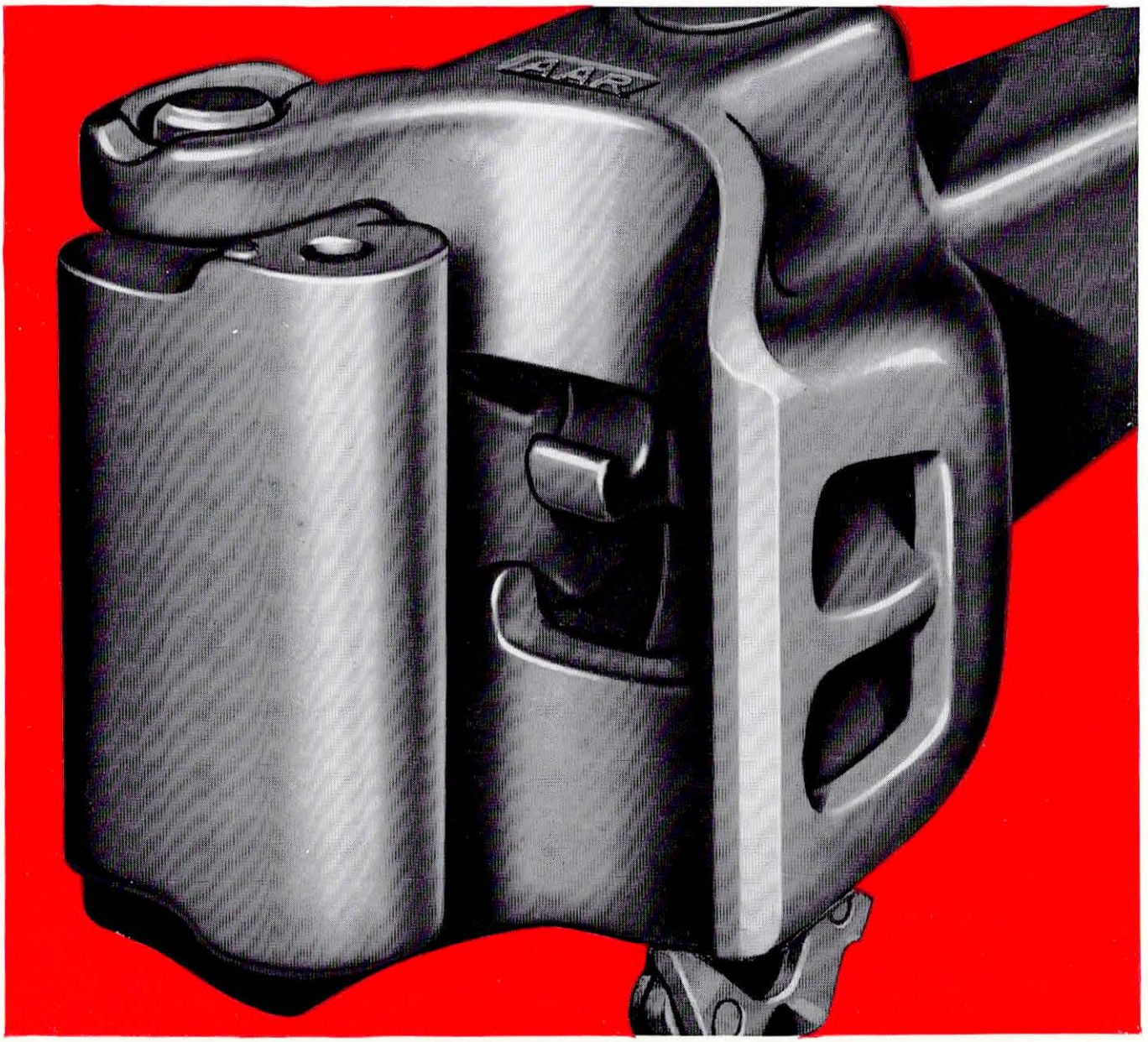

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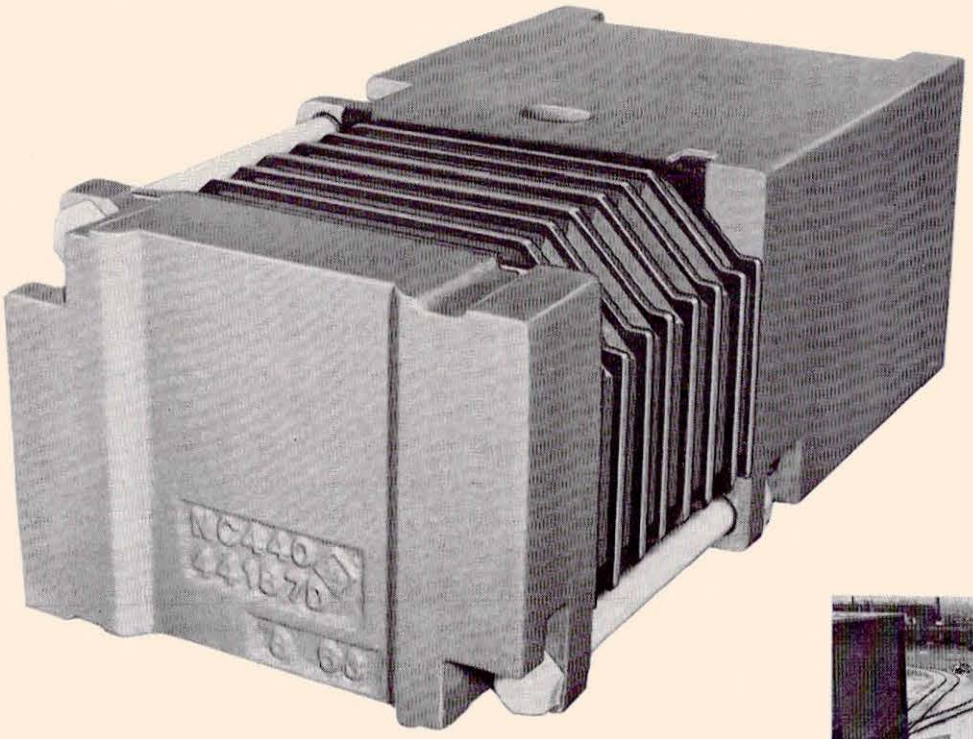

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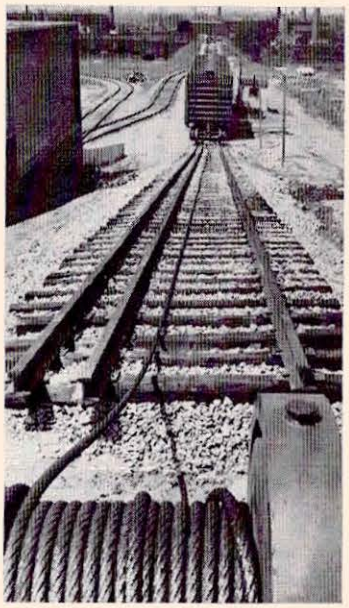

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RAILWAY AGE WEEK AT A GLANCE

May 10, 1965 • Vol. 158, No. 19

How are the new work rules working?

A preview of an eye-opening report that will be presented to Association of Railroad Superintendents next month **p.10**

NP uses a computer to 'measure' clearances

A new system, utilizing the road's electronic brain, simplifies and speeds handling of high-wide load requests **p.18**

Berwick bounces back with railroads

A new railway supplier has helped breathe economic life into a northern Pennsylvania town **p.20**

PRR uses all-welded bridges on big project

Maintenance costs are expected to be lower for the new structures than they would be for a riveted design **p.22**

Midwest railroads dry out

The floods have receded, and railroads are back in business. But they'll be counting the cost for months to come **p.25**

Railroad purchases highest since 1957

Last year railroads spent some $1.47 billion for fuel, materials and supplies. Here's the breakdown **p.28**

RPI's new head plans 'public-relating'

Nils A. Lennartson, the Institute's president, has impressive qualifications as a public-affairs expert **p.32**

The Action Page—Are new work rules helpful?

By and large, the new rules seem to be helping to bring about more efficient railroading **p.38**

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SHORT AND SIGNIFICANT

Southern awards contracts for new Macon yard

The Southern will build "the most modern of yards" at Macon, Ga., on a fast schedule that will put it into operation by Jan. 1, 1966. Total cost will be $12 million. General Railway Signal has won a $1.3-million contract for installing a retarder system, including electronic gear controlled by a digital computer. A $1.1-million grading contract has gone to the Farrell Construction Co. of Memphis, Tenn.

●

SP's three-year outlay for rolling stock: $350 million

The full dimensions of Southern Pacific's record-breaking rolling-stock program have now become known—and they're impressive. Chairman D. J. Russell says SP is nearing mid-point of a program involving expenditure of $350 million for 14,700 pieces of new equipment. Acquisitions in 1964 totaled 3,246 freight cars and 185 locomotives. In 1965, the railroad will add 4,745 freight cars and 149 locomotives. Programmed for 1966 are 3,850 more freight cars and 153 additional diesel units. Says Russell: "This massive and continuing capital investment is a key to lower transportation costs for American industry. By improving our own efficiency, and by offering shippers attractive opportunities for savings, this investment helps us hold the line against freight rate increases."

●

The FEC battle: Still keeping the courts busy

With the Florida East Coast non-op strike well into its third year, a tangle of court cases has grown up—newest of which involves the railroad and the ops. FEC is asking $10 million in damages from the Engineers, Conductors and Firemen on grounds that the organizations condoned a dispute that did not concern them. Meanwhile, the Engineers are asking for a court order to force FEC to produce x-rays of engineers who were allegedly disqualified for medical reasons when they tried to return to work after a BLE strike. And BLE Grand Chief Engineer Perry S. Heath leveled a blast at national business and consumer magazines which have published articles favorable to FEC. Says Heath: "FEC remains disgracefully out of step, out of kilter, an ugly blot on the national scene."

●

From the BLF&E: Harsh words, a warning . . .

So far as H. E. Gilbert is concerned, the Brotherhood of Locomotive Firemen & Enginemen has only begun to fight. Gilbert, president of the embattled union, held a press conference in Washington to review what's happened under the fireman-off arbitration award—and to warn of what may happen next spring when the award is due to expire. "Whether anyone likes it or not," he declared, "the BLF&E is not dead, is not dying and will be around a long time. So will the dispute over the use of locomotive helpers (firemen)."

. . . and a proposal to get Congress into the act

Gilbert cited past BLF&E arguments relating to safety and unemployment among displaced firemen. He charged that "one railroad seemed to be trying to outdo the other in applying the award as severely as possible." Then he got to his plan: "I call upon the Congress to provide a forum to air these problems, to provide an unbiased study of what has happened under compulsion." The outlook for such a development? Not good, as a number of observers see it. Why? Congress thought it had settled the firemen issue once (as well as framing means of settling other work-rules issues). And the Congressional mood then seemed to be one of irritation at becoming involved, followed by relief when the case passed out of the legislative picture.

MONDAY MORNING REPORT

L&D: Equipment helps —but it's no panacea

Freight claims are exerting as much upward dollar-pressure on the design and configuration of the railroad car fleet as commodities and rates —but still the industry freight loss and damage bill mounts. This investment is a competitive boost, not an L&D deterrent, said two top rail officers addressing some 200 specialists in the science of freight claim handling and prevention at Dallas last week. The AAR's Freight Claim Division and Freight Loss and Damage Prevention Section met there May 4-6.

'Real-time picture'

The AAR's operating vice president, Rex Manion, pressed for a "total approach" and some new concepts to reduce the industry's L&D payout—$145.5 million in 1964. Describing the enormous sums expended by railroads to upgrade their car fleets, Manion noted that a considerable amount of the $1.1 billion spent by railroads on equipment last year was spent on innovations "specifically designed to reduce loss or damage." Manion urged the freight claim specialists to focus their efforts on areas contributing the largest amounts to this terrific bill, and to upgrade L&D prevention data via electronic data processing techniques to secure a "real-time picture" of the problem.

Damaged shipments often mean damaged equipment

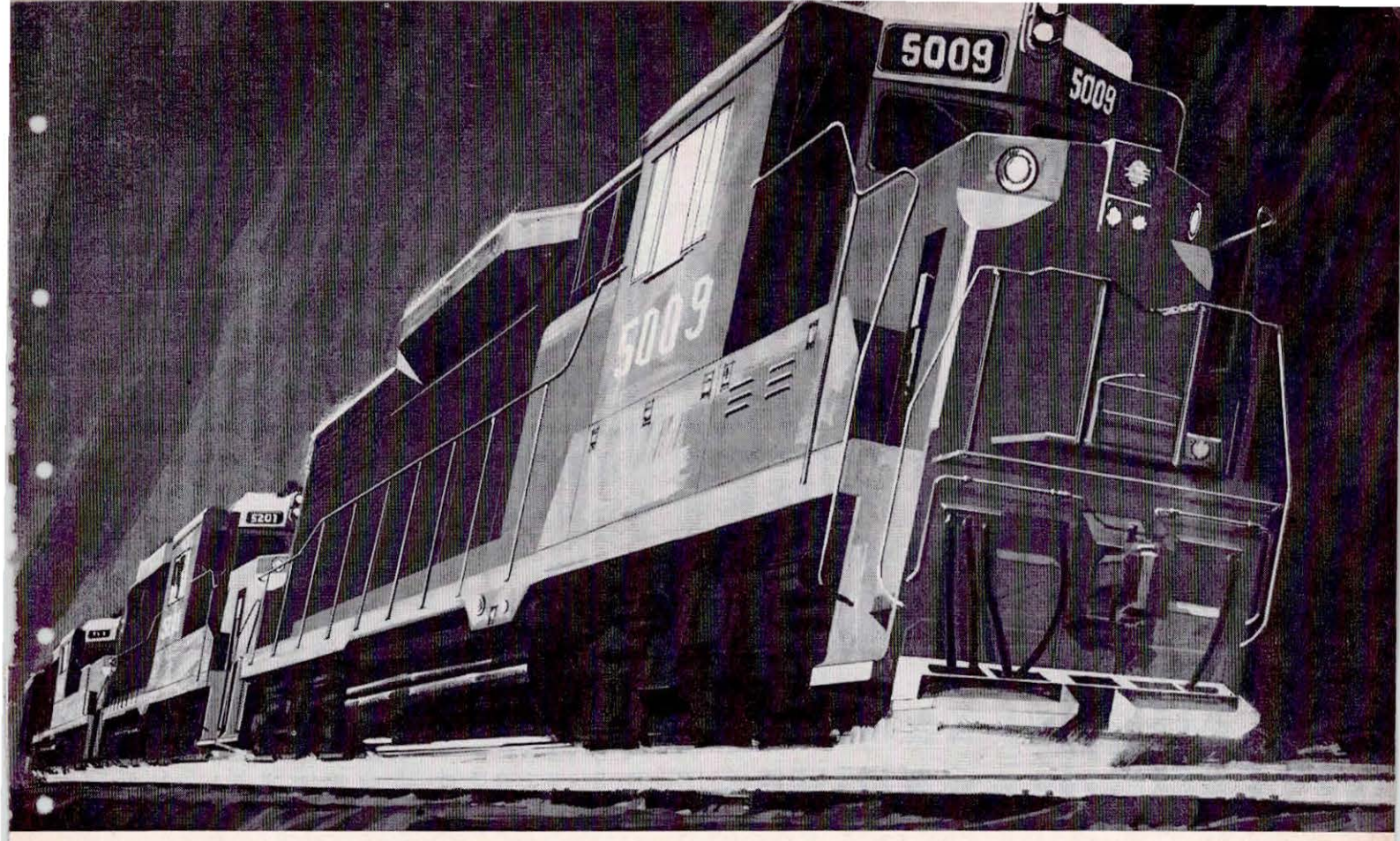
O. H. Osborn, vice president and general manager of Gulf, Colorado & Santa Fe, told the freight claim men that damaged shipments often meant a damaged car, thus adding another expensive dimension to this already expensive problem. He cited Santa Fe's acquisition of specialized freight cars to show how equipment alone cannot reverse L&D trends. In 1960, Santa Fe owned two cars equipped with shock control underframes but with no load-restraining devices. On Jan. 1, Santa Fe owned 1,837 such cars. Santa Fe owned 617 cars equipped with shock-control devices and load-restraining equipment in 1960; on Jan. 1 this year Santa Fe owned 4,976 such cars—plus 4,933 cars equipped with load-restraining devices but no cushion underframes. Despite these additions, he noted, there has been no improvement in the road's L&D picture.

All railroads haven't done their homework

Osborn told the freight claim division conference that the steady rise in industry installations of roller bearings (64.3% of cars built in 1962, 78.3% in 1963) also represents an enormous investment in L&D prevention inasmuch as wrecks and derailments caused by hotboxes are a considerable factor in freight claims. "Not only rolling stock, but also retarder yards, smoother railroads and other improvements" have cost huge sums "but have not paid off from a loss and damage standpoint," because not all railroads have done their homework.

A task for everybody

Osborn not only blamed lack of industry-wide prevention effort for the deterioration of L&D performance; he said competition in the markets is a major—and serious—pressure behind rising L&D ratios on railroads everywhere. Citing post-World War II development of materials handling techniques (replacing former hand loading and unloading of box cars), competitive "shaving" of container costs by shippers and the pressure of declining average ton-mile revenues in the face of a traffic mix whose value is rising steadily, he opined that no progress would be made unless all the railroads decide to conquer the problem. "There are comparatively few shipments transported that do not involve more than one railroad. If all the railroads plus the shippers and receivers do not sincerely cooperate, they'll never find an answer," was Osborn's grim summing-up.



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RAILWAY AGE WEEKLY
May 10, 1965

How the new work rules

The long, bitter dispute over changes in railroad working rules ended one year ago. Now, top operating men tell how the new rules have affected efficiency, morale, overtime, union relations and operations.

New work rules—and how they've performed since they went into effect in May of 1964—will be a key topic for railroad operating officers from all over the U. S., Canada and Mexico when Joe Powers, president of the American Association of Railroad Superintendents, bangs the gavel opening the annual meeting of the association in St. Louis June 15.

AARS President Powers (who is superintendent of rules for the New Haven) appointed, at the association's annual meeting in Chicago last June, a blue-ribbon committee of railroad operating officers from all over the U. S. to investigate the effects of the national work-rules changes. Results of the committee's report will be presented to the annual meeting of operating officers by the committee chairman and members June 16.

Here are highlights of the AARS committee's report on national work-rules changes.

● **Changes began last May.** "One of the most important aspects of railroad operations—manpower utilization—is beginning to change after several decades of being embalmed in restrictive contracts," notes the AARS report.

"A beginning has been made, after a bitter five-year battle with the railroad operating unions, towards bringing manpower utilization into line with technological advances. The changes," says the AARS committee, "are nowhere near the magnitude of the changes in recent years of motive power, cars, track and communications—but a beginning has been made."

Final settlement of the work-rules dispute came in May 1964, after the so-called White House agreement. Changes began almost immediately in the use of firemen in freight and yard operations and, later, in the size of train crews as the crew-consist parts of the settlement began to take effect on railroads across the country.

The AARS Committee for Reporting on Work Rules sampled operating experience on railroads in all sections of the country to see what happened during the nine-month period between June 1, 1964, and Feb. 28, 1965, as the new work rules began to go into effect.

● **Answers from men who know.** Questionnaires were addressed to division superintendents on 67 railroads. The AARS committee felt that division superintendents, being the line officers directly charged with operations, would be the officers who could best identify and evaluate important changes in practices, efficiency, morale and services. The AARS report is based upon a summary of questionnaires returned to the committee by 26 division superintendents on 24 railroads.

Superintendents' verdict

The AARS committee feels that the sampling of experience as reflected in its report is not absolute verification of industry positions in the recent work rules case, but that it is a strong indication that complete statistics will bear out the railroad industry's contention that modernization of work rules was absolutely necessary in light of competition and the technological changes that have come about in railroad operations.

● **Findings support industry.** The AARS committee found strong indications that the new work rules are working, by and large, as industry leaders expected them to operate. The 26 division superintendents replying to the questionnaire report that they controlled 415,975 crew assignments during the nine-month period ending Feb. 28, 1965. During that period 167,378 assignments were worked without firemen (three of the divisions were partly under restrictions of state full-crew laws). In the same period, 38,655 crew assignments on the divisions of 15 of the superintendents checked operated with crews on which crew size had been affected by crew-consist awards.

There were 866 accidents, derailments and wrecks reported on the divisions polled by the AARS committee. On 286 of these no fireman was in the cab—about the percentage one would expect from the ratio of assignments with and without firemen. Division superintendents, in almost all cases, noted that the presence or absence of a fireman in the cab had nothing to do with the accidents reported.

One superintendent made the point that one derailment on his division was caused by failure of the ground crew to perform properly, and that work rules have little if anything to do with the hazards created by culpable manfailure.

● **Evaluate manpower expense.** To evaluate effectively the conditions under which the nine-month period was worked, the AARS committee asked the superintendents if they had experienced any increased manpower requirements during the nine months because of increased business during the period. More than half (52%) replied they had not had any increased manpower requirements due to a business upswing. The other 48% replied that there had been some increased manpower requirement because of an upswing in traffic during that period.

The AARS committee asked if there was any upswing in overtime attributable to crew-consist reductions in manpower on assignments. A sizeable majority of the superintendents—84%—replied that there had been no rise in overtime they could attribute to crew consist awards. A rise in overtime was reported by 8% of the superintendents; 8% of the AARS respondents failed to reply to that query.

● **Morale — largely status quo.** Morale of workers and supervision was questioned by the AARS committee's questionnaire. Asked if there had been any change in worker morale during the first nine months the new work rules went into effect, about 60% of

are working out

One year after the 'White House agreement'

Respondents reported 415,975 crew assignments
(nine months ending Feb. 28)
248,597 were operated with firemen
167,378 were operated without firemen

They listed a total of 866 accidents in the period
580 accidents were on assignments with firemen
286 accidents happened on assignments without firemen

Of manpower requirements during the nine months
52% said they had experienced no change
48% said increased business caused an increase in manpower needs

Of overtime because of crew consist awards,
84% said there was no rise in overtime because of manpower reductions in crew size
8% said there was a rise in overtime
8% did not reply to this question

Asked about employee morale after the work rules settlement,
60% said there was no change
12% said that employee morale was better
20% said employee morale was worse
8% did not reply to the question

Asked about supervisory morale during the same period,
75% said there was no change in supervisory morale
20% reported better supervisory morale
5% did not reply to the question

Asked about relations with local union officers since the settlement,
68% reported that relations were unchanged
22% reported improved relations with local union officials
10% reported worse relations

Asked if further changes were needed in work rules,
88% of the superintendents queried said yes
8% thought there were no more changes needed
4% did not reply

Asked if the new work rules, on balance, benefited operations and performance,
84% of the superintendents said they did
4% said the new work rules did not benefit performance
4% thought the benefit of the new work rules were questionable
8% said that it was too early to be able to tell

the superintendents replied that morale was unchanged. Worsened morale was reported by 14%. Improved morale among workers was reported by 18%, and 8% did not reply to the question.

Roughly 75% of the division superintendents reported there had been no noticeable change in the morale of the division's supervisory force in the nine-month period. A perceptible improvement in supervision's morale was noted by 20% of the division superintendents; 5% did not reply.

● **Local union relations.** One interesting aspect of the morale question was the response to a question asking if relations with local union officers have changed since the new work rules went into effect.

A surprisingly high percentage of division superintendents (22%) reported that relations with local union officers have improved since the new rules went into effect. Unchanged relationships with local union officers were reported by 68% of the railroad officers replying to the AARS questionnaire. Worsened relationships with union representatives were reported by 10% of the respondents—though perhaps half of that 10% qualified their answer with the observation that relations with local representatives of the Brotherhood of

WATCHING WASHINGTON WITH WALTER TAFT

TAFT

• **THE DROP IN FREIGHT CHARGES** of the railroads has amounted to an average of 13% since 1958. The decline has been accompanied by a rise of 7% in consumer prices as measured by the index of the Department of Labor's Bureau of Labor Statistics. This contrast of inflationary and counter-inflationary trends has been pointed up by Burton N. Behling, vice-president of the AAR and director of its Bureau of Railway Economics.

Behling's figures are on the average-revenue-per-ton-mile basis. They show that this amounted only to 1.27 cents at the end of last year, against 1958's 1.46 cents. The AAR vice-president called the downtrend the most significant indicator of how changing railroad technology is benefiting the public. He described it otherwise as "the end-product of railroading's billion-dollar-a-year post-war modernization program, merger-induced efficiencies, gradual updating of work rules, and new customer services."

• **ANOTHER AAR OFFICER,** meanwhile, has emphasized that economic dislocations brought about by subsidies to truckers and water carriers—not railroad rate adjustments—are the disrupters of traditional grain marketing arrangements. The Association's general attorney, Harry J. Breithaupt, Jr., argued this as a panelist at the recent annual meeting of the Millers' National Federation in Washington.

BREITHAUPT contends that the railroads should not be made a whipping boy because they have been compelled to cut rates in order to stay in the grain-hauling business. He says it's the interference of subsidies with the normal operation of economic laws which seems to be hurting millers in the wheat producing areas. He explains that the injury results because wheat is moving by barge and truck at rates below the flour rates.

FOLLOWING THROUGH, the AAR attorney argues that any couching of this development in terms of regulation versus deregultion begs the issue. That's because both the barge lines and truckers already have rate freedom in this area. The barges have the Interstate Commerce Act's bulk commodity exemption and the truckers have the act's agricultural exemption.

THIS IS THE PERSPECTIVE in which Breithaupt thinks the millers' complaint should be appraised. That approach, of course, relates the complaint to the situation under present law—not to what the prospects would be if the railroads had greater flexibility in the pricing of their competitive services.

DESPITE this fact of life in the transport field, however, the grain trade probably supplied the margin of opposition which prevented Congress from considering rate-freedom legislation last year. The proposed legislation was in a bill which reflected the House Commerce Committee's partial response to the late President Kennedy's call for the ending of minimum-rate regulation for the transportation of commodities in bulk and agricultural products.

THE BILL was sponsored by that committee's chairman—Representative Oren Harris (D.-Ark.). Its provisions in the rate-freedom area proposed to extend the agricultural exemption to railroads and water carriers and to narrow the bulk-commodity exemption while leaving it applicable only to water carriers. The grain trade joined the water-carrier and coal industries in opposing the bill which died when House Rules Committee refused to clear it for House consideration. The trucking industry was with the railroads in supporting the bill.

Locomotive Firemen & Enginemen have worsened in the nine-month period.

• **More change ahead.** Division superintendents, by and large, feel even more change is ahead in railroad manpower utilization practices. While 60% of the respondents to the AARS questionnaire said they could foresee technological change ahead that will drastically alter industry manpower requirements in the years ahead, an additional 8% thought such major change "quite probable." However, a substantial group —32%—could foresee no such technological change on the industry horizon.

Asked somewhat the same question —but on a smaller and more immediate scale—a much larger percentage of division superintendents (88%) saw more areas of waste that need to be eliminated in present practices before carriers can hope to get optimum manpower utilization. Eight per cent of the respondents saw no further waste in present work rules; 4% did not reply to the question.

• **Specific needs cited.** In response to the above question—as to what areas need improving in present work-rules arrangements—division superintendents had a great deal to say.

Practically all of them felt that inter-divisional runs and the distinction between road and yard work are restrictive to a harmful degree—and that modernization of present rules in these areas is needed. Also mentioned by many was the need for eliminating so-called full-crew laws on the books in many states.

Here are some verbatim comments from superintendents addressing themselves to this problem:

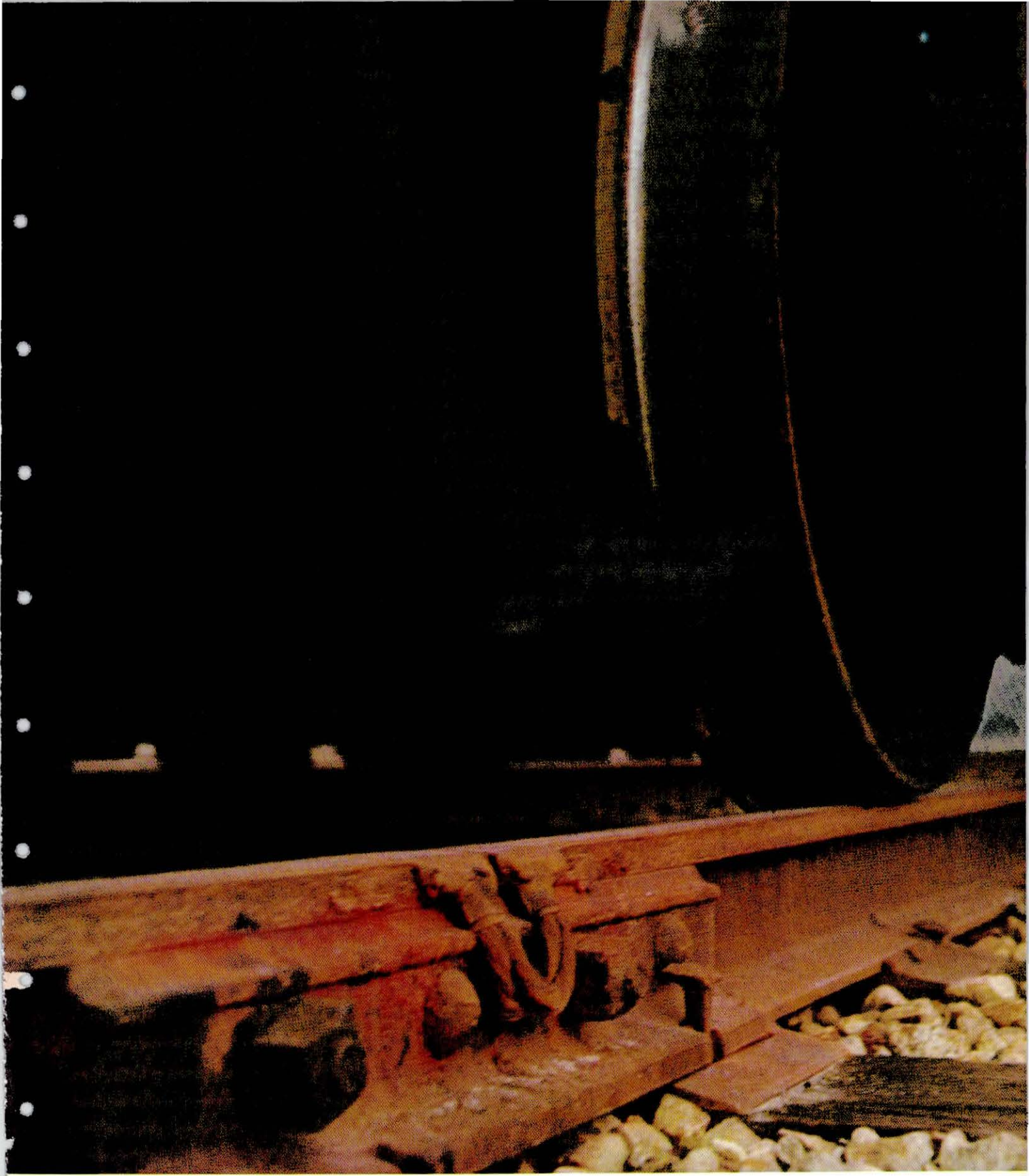
— "We need further modification for both train and engine service work rules—as well as modernization of some non-op craft work rules—to allow the railroads to fully make use of the efficiencies of the billions of dollars of new equipment that the carriers have bought in recent years. As an industry we behave just like an airline that has bought 700-mph jets—and then put them in service stopping at 70-mile intervals."

— "Initial and final terminal delay arbitraries have actually worked against us. There is too much latitude in calling rules and in the exercise of seniority —especially in cases of one-day vacancies."

— "Yard-work and road-work distinctions should be modified or done away with. Restrictions on utility men, switch-tenders and zone work should be eliminated."

— "Change is needed in those states where full-crew laws keep unnecessary

(Continued on page 17)



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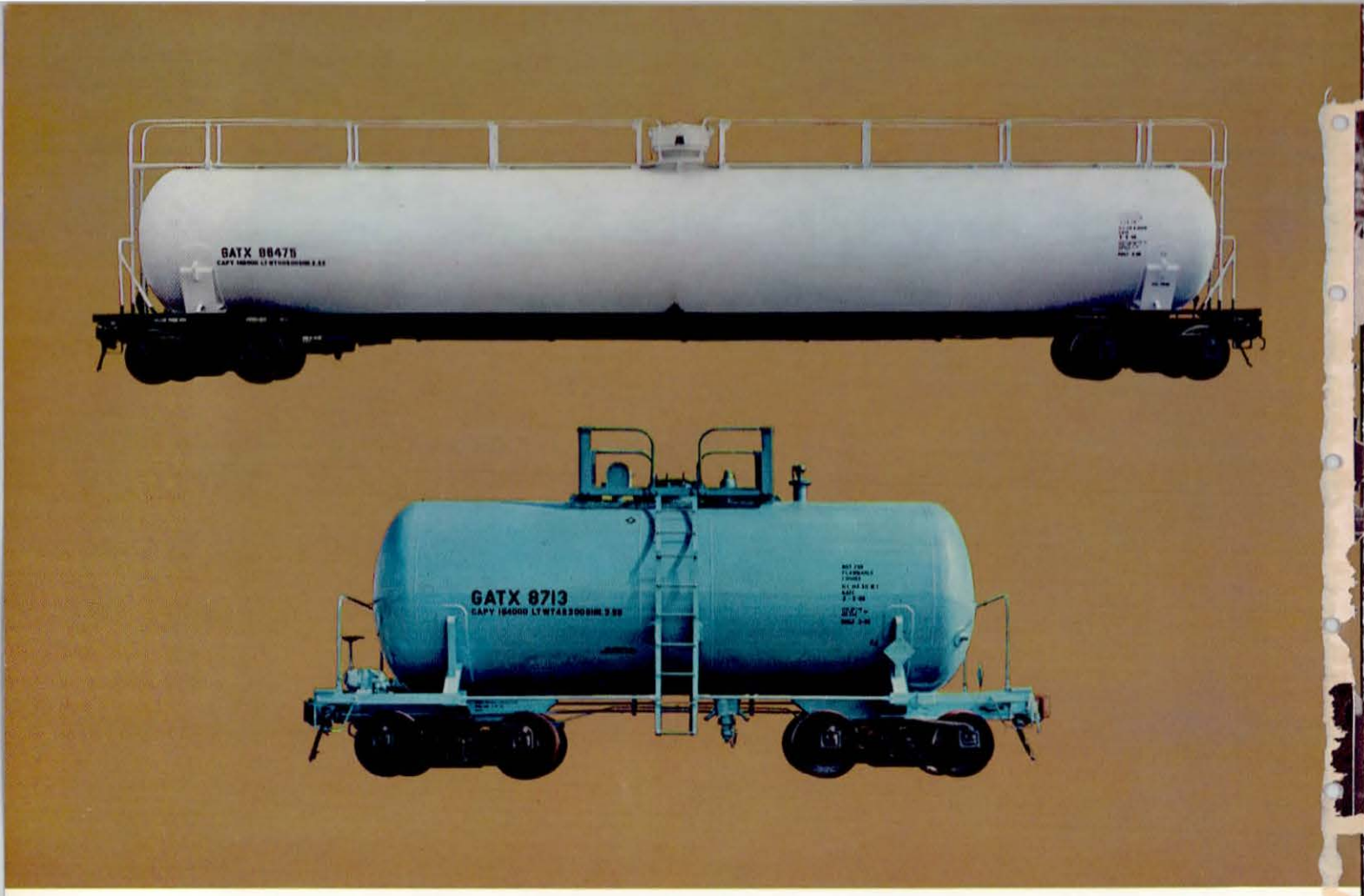

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TANK CAR DIVISION.

GENERAL AMERICAN TRANSPORTATION CORPORATION CHICAGO 60690

GATX™

84% of superintendents find changes beneficial

(Continued from page 12)
men on train crews."

— "Rules should be adopted requiring crews to use radios in yard and industrial operations."

— "We need to eliminate flagmen on passenger runs."

— "Development of walkie-talkie radios have made many trainmen and switchmen's jobs redundant."

— "Flag protection against following movements on the same track in CTC and automatic block territory is not needed."

— "Intermediate operations of a railroad need to be streamlined. . ."

— "I feel there is definitely a waste in present work rules because of the overlapping jurisdictions of the various crafts and particularly that portion of the various work rules which requires an employee in one particular craft to go a long distance to perform perhaps only one hour of work when there is an employee available in another craft who could have performed the same work."

— "Speaking for a terminal operation only, I believe the area of starting time, rules and the matter of reciprocal deliveries between carriers operating direct interchanges needs to be improved."

— "Railroad men ought to have the ability to perform more types of service with no arbitraries or restrictions. . ."

● **But, there are politicians. . .** In the area of technological improvements that may drastically alter railroad manpower requirements in the years ahead, the superintendents displayed great interest in remote control of trains; advancements in CTC, automated switching, a host of improvements in operations and procedures because of computerization, automatic car identification, radio, cab signals in yard engines, automatic hump operations and other advances.

Fair play—or votes?

One superintendent said he saw no possibility of change because of technological change "as long as our politicians are more interested in votes than they are in fair play." Several superintendents appraised the situation as one that pivots on the ability of railroads and unions to get together for orderly and equitable assimilation of technological change into the industry.

● **Over-all, changes were good.** The AARS committee asked a general question of the superintendents, asking them if, on balance, they felt that the recent changes in work rules had worked to the over-all benefits of their divisions or not.

A majority of the superintendents—84%—replied that the changes were good and had worked to the benefit of their division and their railroad. A small group—4%—said the new work rules had not worked to their divisions' benefit. Another 4% thought the value of the new work rules was "questionable." Eight per cent of the respondents to the AARS questionnaire frankly admitted they didn't know whether their division was benefited or not, or said that it was too early to tell.

Shipper reaction

Many superintendents replying to this question in the questionnaire cited definitely more economic operations of their divisions—for work handled. One superintendent noted an odd side-effect of the new work rules: customer approval. "I feel," wrote this superintendent, "that the company has not only profited economically from the work-rules changes, but also has benefited from a favorable reaction on the part of our customers. Many of our customers felt that our crews were overstaffed and that the firemen, in particular, contributed little or nothing to the efficiency of the working crew."

● **More modernization needed?** In sum, the AARS Committee for Reporting on Work Rules feels that a large majority of industry division superintendents who replied after nine months of actual operation under the new work rules approves the changes the industry was able to secure in the long dispute with the operating unions and feels that railroads generally have benefited economically. A strong feeling reflected by the AARS respondents was that even more work-rule modernization is desirable and that technological change ahead will require continuous pressure to keep manpower utilization abreast of developments as they transform the industry.

The somewhat ambiguous summary of worker morale (60% unchanged, 18% improved, 14% worse, and 8% no reply) suggests a need for programs to improve employee morale on some railroads—no surprise to knowledgeable observers. Also no surprise to the AARS committee members was the summary of division superintendents' relationships with union officials at local levels (68% unchanged, 22% better, 10% worse). This too, now that a breathing spell in railroad-union relations is here, represents an area where division superintendents can try to secure a betterment—before carriers and unions face each other across the bargaining table next year.

● **Safety not affected.** Despite the diligence with which the labor press has reported railroad accidents in words and startling photos since Award 282 brought on operations of trains run without firemen, there is no positive evidence that the presence of a fireman in the cab would have had any effect on safety. The division superintendents in the AARS sampling turned in accident figures (866 total, with 286 of these on assignments without firemen) that indicated about 33% of accidents occurred on trains without firemen. The accidents were generated by 415,975 crew assignments—of which 167,378 assignments were worked without firemen. When one removes from the 415,975 assignments the assignments that were made in full-crew territory, the percentage of assignments running without firemen in that time amounted to about 40% of total assignments. One can hardly generalize from such a sampling as the AARS respondents provided. It is, nonetheless, obvious that there does not seem to be any specific relationship between the two figures. Indeed, if one were to draw a conclusion it would be that the 40%-or-so of the assignments operated without firemen were slightly safer than those with firemen—having generated only 33% of the accidents which were reported.

● **Other AARS reports.** The operating officers will also hear committee reports on "Freight Cars—Control, Handling and Maximum Utilization," "The Superintendent and Discipline," "Loss & Damage: A New Approach," "The Joint Responsibility of Operating and Traffic Officers," and other reports of great importance as railroad operations change from month to month. AARS President Powers strongly urged railroads to have men at the association meeting—not only to hear the reports but also to participate in the discussions after the committees present their reports.

"Some of the most valuable knowledge an operating officer can get is from the experience of his counterparts on other railroads," he noted. "This year's reports will probably trigger more directly useful information to the AARS membership than any meeting in a long time." ■

How the NP uses a computer for

The road's electronic brain provides simplified, quick handling of high-wide load requests. The chances for error have been minimized.

When the Northern Pacific's engineering department is requested to determine if a particular high or wide load can be handled it is no longer necessary to assign a draftsman to do the job.

The company's IBM computer does it. The machine does it by comparing dimensions of the load with the outlines of restrictive structures previously placed on a master tape. The necessary information is thus developed much more rapidly than before and with appreciable savings in man-hours.

• **Began in '63.** The new system is the outcome of a study begun in 1963 under the direction of D. H. Shoemaker, NP's chief engineer. Purpose of the study was to make it possible to find quickly, through use of the company's computer, the clearances of structures such as tunnels, railroad and overhead bridges, wire crossings and rock cuts when determining if a particular high and wide load could be accepted.

With the system that has been worked out it is also possible to determine the widest and highest load which can be handled on certain routes with any clearance of less than six inches down to 1½ inches. In addition, restrictions for handling heavy cars (exceeding 263,000 lb), as determined by the weight of the track rail, will also be included in the computer program.

No attempt is made to include in the program loads of extraordinary weight, or multiple loading, or loads with a high center of gravity, or other loads which, in the opinion of the engineering department, present special conditions and must be handled on an individual basis.

Currently, the Northern Pacific engineering department handles from 20 to 25 requests daily for high and wide loads. These include not only actual shipments being loaded or under way, but also prospective shipments. Requests for handling high and wide loads, and larger and longer cars, are increasing continually.

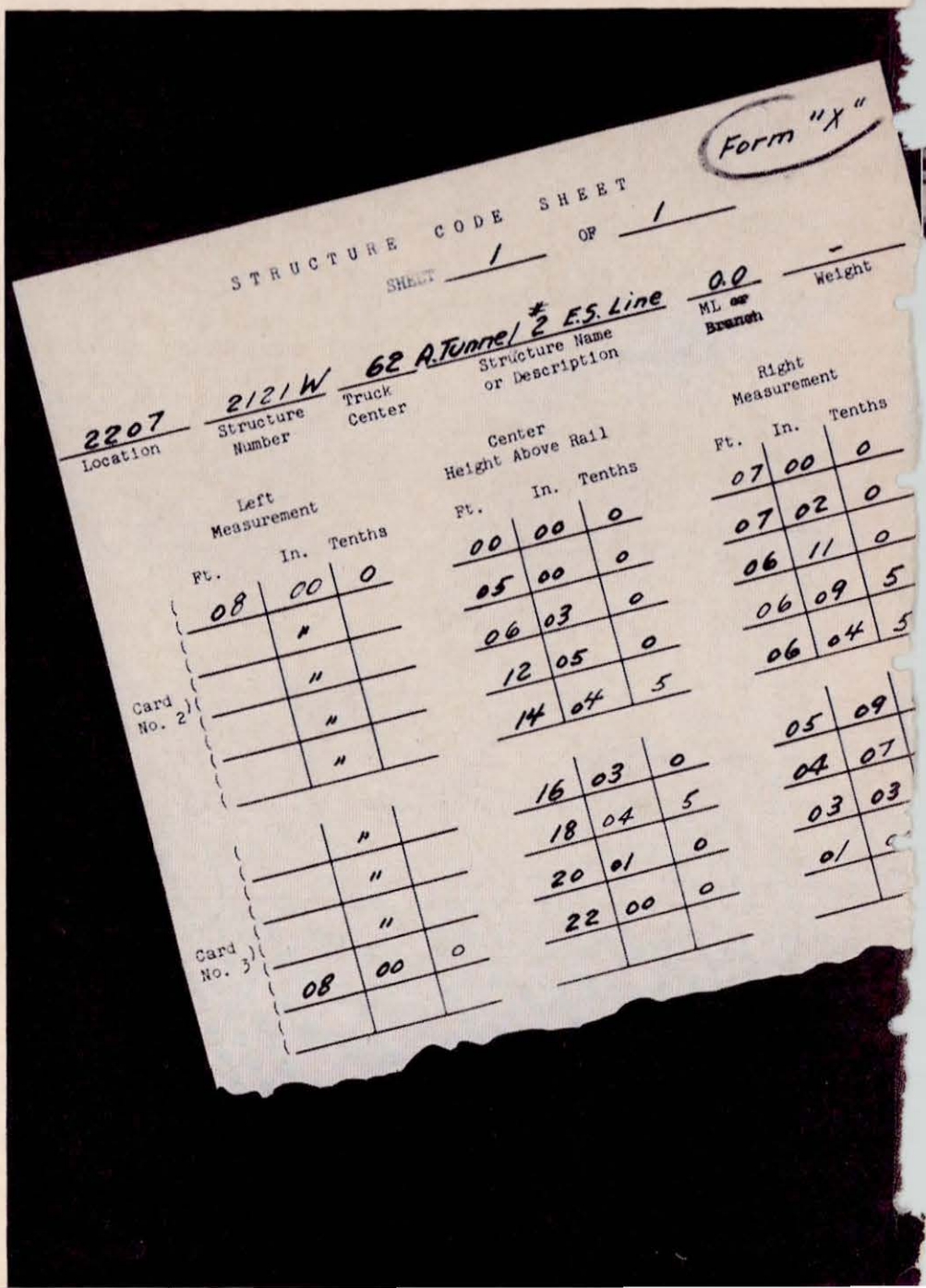
• **How requests originate.** Normally, the engineering department receives requests from the superintendent of transportation to determine if a particular load can be handled for which dimensions exceed the scope of the data shown in the Railway Line Clearance publications. This usually originates in a telegram from the shipper to the general superintendent of transportation who, in turn, refers the matter to the engineering department.

Previously, one draftsman was assigned practically full time to develop the clearance data and itemize it on a special form. This was checked by another draftsman and sent to a duplicating machine for the production of copies to transmit to all concerned, including the general superintendent of transportation, operating vice president, chief of the service bureau, and to the files. The processing of each load took from 15 to 25 min.

Loads with high centers of gravity or excessively heavy weight, and loads which may be too high or too long to handle because of wind conditions, are processed specially by the bridge department.

For determining the data currently shown in the Railway Line Clearance publications, it was necessary for a man to spend one month in processing

Two basic forms used by the NP for determining



'measuring' clearances

the acceptability of outsize loads

the width of loads for each three inches of height above top of rail for various routes on the Northern Pacific. An additional two weeks of a second man was needed to check the information. The data in the Railway Line Clearance show maximum dimensions for loads to be handled without referral to the engineering department for special handling.

● **Preparation of basic data.** In preparing the necessary program for use with the IBM 1410 computer, the development of a Structure Code Sheet (Form "X") was required. All coordinate dimensions from center line of track to a structure outline left and right, and certain distances above top of rail, are placed at intervals necessary to get the true outline of the structure. Maximum width is placed at 8 feet right and left of the center line of track, and up to and including 22 feet above the top of rail. The intervals above top of rail are a maximum of three inches. In some instances the intervals are as little as one inch, depending upon changes in the contour of the structure.

In each instance where there is a dimension on the right side of the center line, it is also necessary to include a dimension to the left of center line at the same height above top of rail. This is a requirement for computer programming. Where coordinates outlining a through-plate girder are required, a theoretical enclosure over the track extending 8 feet each side of the center line and 22 feet above top of rail is provided as a limit for the machine to calculate restrictions.

The program is so set that clearances to cars with 42-, 62-, 67-, or 71-foot truck centers can be determined for structures on curves. If the structure is on double track, coordinates for that structure are placed twice, one for westward and one for eastward. If the structure is on a curve, also on double track, coordinates for eight different structures are necessary, four each for westward and eastward tracks based on cars having the four lengths of truck centers.

● **Data on code sheet.** Initial data for the various structures are tabulated on the Structure Code Sheet. This sheet shows the following information:

(1) Location by station accounting number.

(2) An assigned number of four digits plus east or west if the structure is on double track. If the structure is in the westward track, the letter W is used following the four-digit number. This number is determined as follows: The first digit is the division number, the second digit is the subdivision number. The last two digits are even numbers for structures on eastward track, and odd numbers for structures on westward track. If the structure is on single track, the last two digits are odd numbers with no letter following.

(3) The four truck centers—42, 62, 67 and 71 feet—are placed on code sheets. However, if the structure is on a curve, a code sheet has to be made for each structure because of the change in the middle-ordinate for the particular car's truck centers.

(4) A structure name, which is an engineering description of the facility,

(Continued on page 29)

Form "Y"

REQUEST FOR CLEARANCE CHECK

OTHER THAN TANK CARS

Car Number	Car Initials	Truck Center	Weight
65574	N.P.	67	-

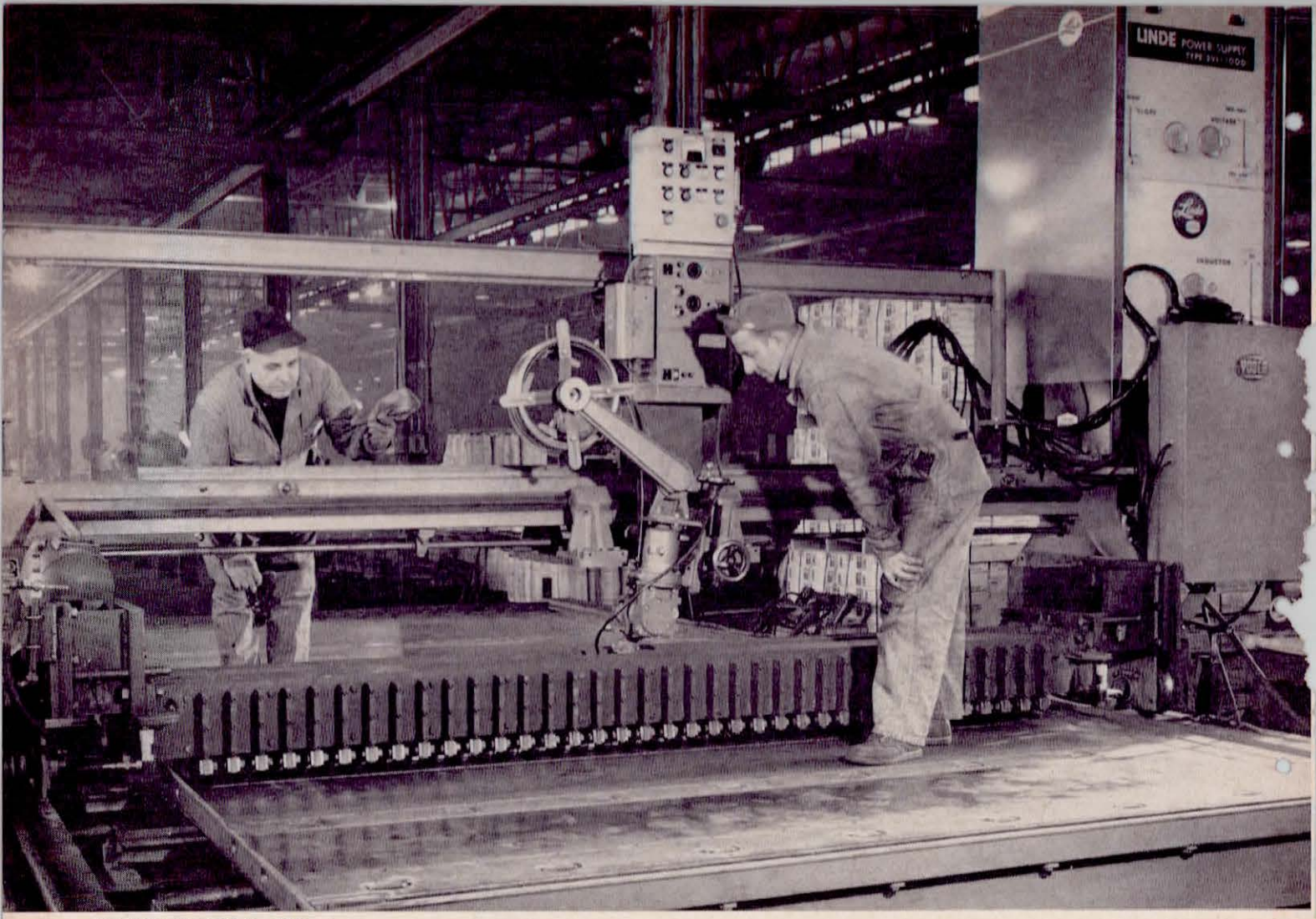
CAR MEASUREMENTS

Left			Height Above Rail			Right		
Ft.	In.	Tenths	Ft.	In.	Tenths	Ft.	In.	Tenths
05	05	5	03	01	0	05	05	5
05	05	5	16	01	5	05	05	5
03	00	0	19	03	0	03	00	0

STATIONS TO BE CHECKED

Branch Line No. 28	From 4406	To 4432
Branch Line No.	From	To
Branch Line No.	From	To
Branch Line No.	From	To
Branch Line No.	From	To
Branch Line No.	From	To
Main Line	From 2207	To 4404

Sample Structure Code Sheet is shown at the far left. Information from these sheets is used in building the master tape, which shows outlines of restrictive structures. Information shown on sample is for a tunnel on the westward track of a double-track main line on a curve. Sheet is programmed for a car with 62-ft truck centers. When a request is received for a clearance check, information about the load is sent to the computer on Form 'Y' (right). The form is used for all cars, except tank cars.



BF&F TOOLS UP

Automatic welding equipment of high capacity was acquired as BF&F tooled up to build large order of box-car sides. Production line turned out 32 sides per day in filling order for 1,100 car sets of sides.

Berwick bounces back with railroads

Community gets economy lift with Berwick Forge and Fabricating making major contribution with growing railway buiness.

The railway orientation of the economy of the Berwick, Pa., area in 1965 would seem almost traditional. It was, after all, over a century ago that the first railroad cars were built there. But just three years ago there didn't seem to be much railroading in Berwick's future.

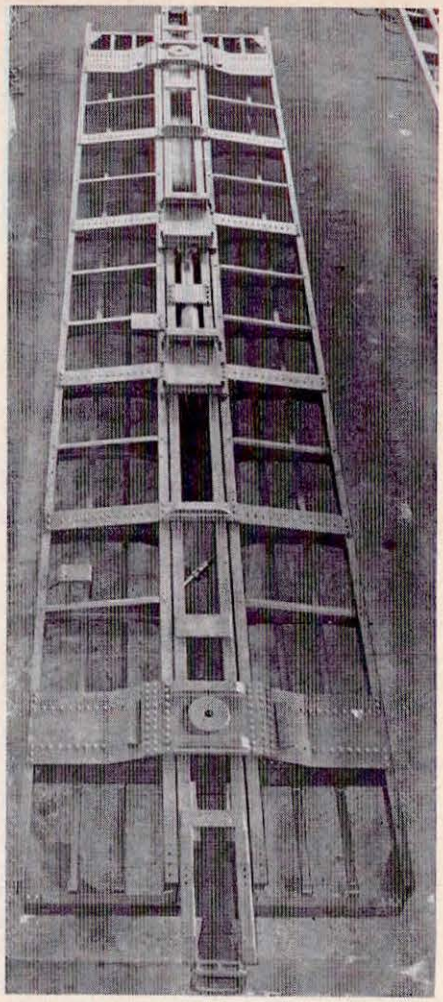
What happened? It was in November 1961 that ACF Industries announced the closing of its American Car & Foundry Division plant—the area's largest industry. That was probably the biggest economic blow the northeastern Pennsylvania community of 18,000 ever had.

● **Railroads again.** Today, due largely to determined community action and the initiative of men long associated with railway equipment manufacture, Berwick's economy is again becoming increasingly railway oriented . . . and no one regrets the turn of events. "We are great believers in today's railroad industry; it has a tremendous future," says A. H. Catterall, president of Berwick Forge & Fabricating, a new railway supplier which, today, operates the largest segment of the former ACF plant.

It was the organizer-owners of BF&F —President Catterall, Vice President W. F. Vorbleski, and Secretary-Treasurer R. P. McBride—who spearheaded the drive which saw the community organize and acquire the former ACF facilities through the Berwick Industrial Development Association. The 23 acres of BF&F land and buildings are the largest single holding in the growing BIDA industrial complex.

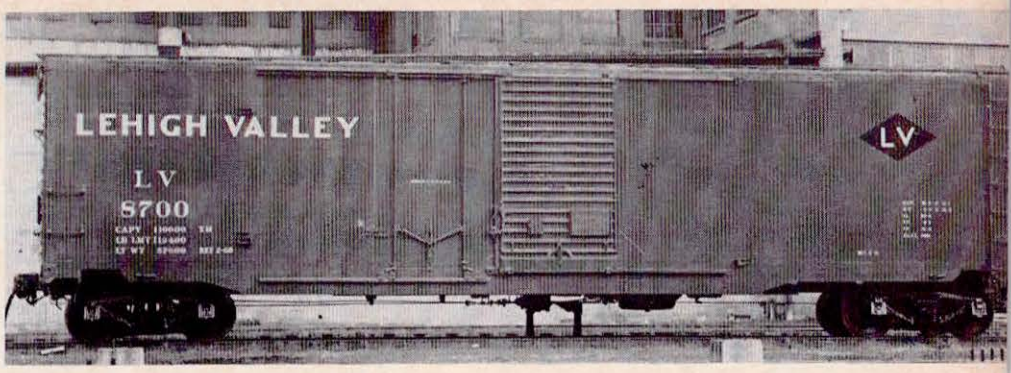
Today, just 2½ years after BF&F started operations, production for the railroad industry is running at a rate commensurate with the continual growth of the railroad industry, and the firm's officers rate prospects for continued growth as "excellent." "Actually, our growth in the railroad field has come in the past 18 months," explains Catterall. "But, today, it accounts for a large percentage of our business."

● **At the right time.** Conceding that BF&F began the forging, fabricating and assembly of railway materials at the "best possible" time—with car



BIG RAILROAD JOB

Underframes for Fruit Growers Express marked entry into volume production.



MAKING THEM LONGER

'Stretchouts' which make 50-foot cars out of original 40-ft models offer excellent potential for the future. This market shows growth as railroads seek larger cars.

buying on the upturn, there seems to be little question about what lies ahead. "Our greatest asset is the know-how and diversified experience of our shop men in fabricating parts and building cars," says Vorbleski. "We have a big reservoir of talent in this area—men with years of experience in all phases of railway equipment and manufacture."

BF&F's first year, starting in November 1962, saw most of its activity in non-railroad areas. A government contract for military vehicles constituted the biggest single chunk of its business. The plant's forging facilities did produce a considerable tonnage of railroad materials along with a diversity of parts for other industries. Tools and equipment were being acquired steadily to increase BF&F capabilities for working in all types of metals and for performing a wider range of metal-working operations.

● **The big break.** Then in 1963 came the big break. Fruit Growers Express ordered 630 underframes for a series of cushioned RB cars which it was to assemble in its Alexandria, Va., shop. BF&F, given its first big chance in the railway market, went right to work. The job called into play a wide range of BF&F facilities—big presses and drop-forge hammers; cutting, welding and riveting equipment; special jigs and fixtures. The sample underframe, completed a week ahead of schedule, met with complete customer satisfaction; the entire order rolled out without a hitch.

To date, over a thousand underframes have been built for FGE and more are just now starting off a BF&F assembly line. Small lots of underframes and center sills have also been turned out for other customers. Welded underframes for pulpwood cars to be assembled in the FGE shop will soon be produced at Berwick.

● **Production up.** The biggest single production run in BF&F's short history is now in progress. In November 1964 the Pennsylvania ordered 1,100 car-sets of sides for 50-foot box cars to be assembled at the PRR's Samuel Rea shop in Hollidaysburg, Pa. The background of the BF&F management team in volume manufacturing was indicated in establishing the production line which would be turning out 32 sides each working day, 600 of a riveted design; the remainder, all welded.

Automated welding at a higher rate of speed than had previously been accepted for production lines—would be necessary to do the job. And the equipment to handle this welding would have to be supplied in a time much shorter than is generally accepted for delivery of heavy, custom-built industrial equipment. By knowing how and where to obtain the necessary equipment, BF&F men were able to set up the line so that production could start less than two months after the placing of the PRR order. Recently there has been a second order from the railroad for sets of sides for 60-foot cars which are being produced without interruption on the production line.

● **Stretch-outs.** As BF&F expanded its activities from car forgings to major car subassemblies, some of its shops which had been built originally to assemble complete cars began showing a potential for a further penetration of the railway market. Current interest in high-cube cars indicated there was a market in "stretch outs" of existing equipment to better fit cars to today's traffic conditions. Recently, 50-foot box cars have been produced by adding 10-foot sections to existing 40-foot cars which were sent to BF&F for "stretching" and upgrading. This market is showing substantial growth.

Diversified work

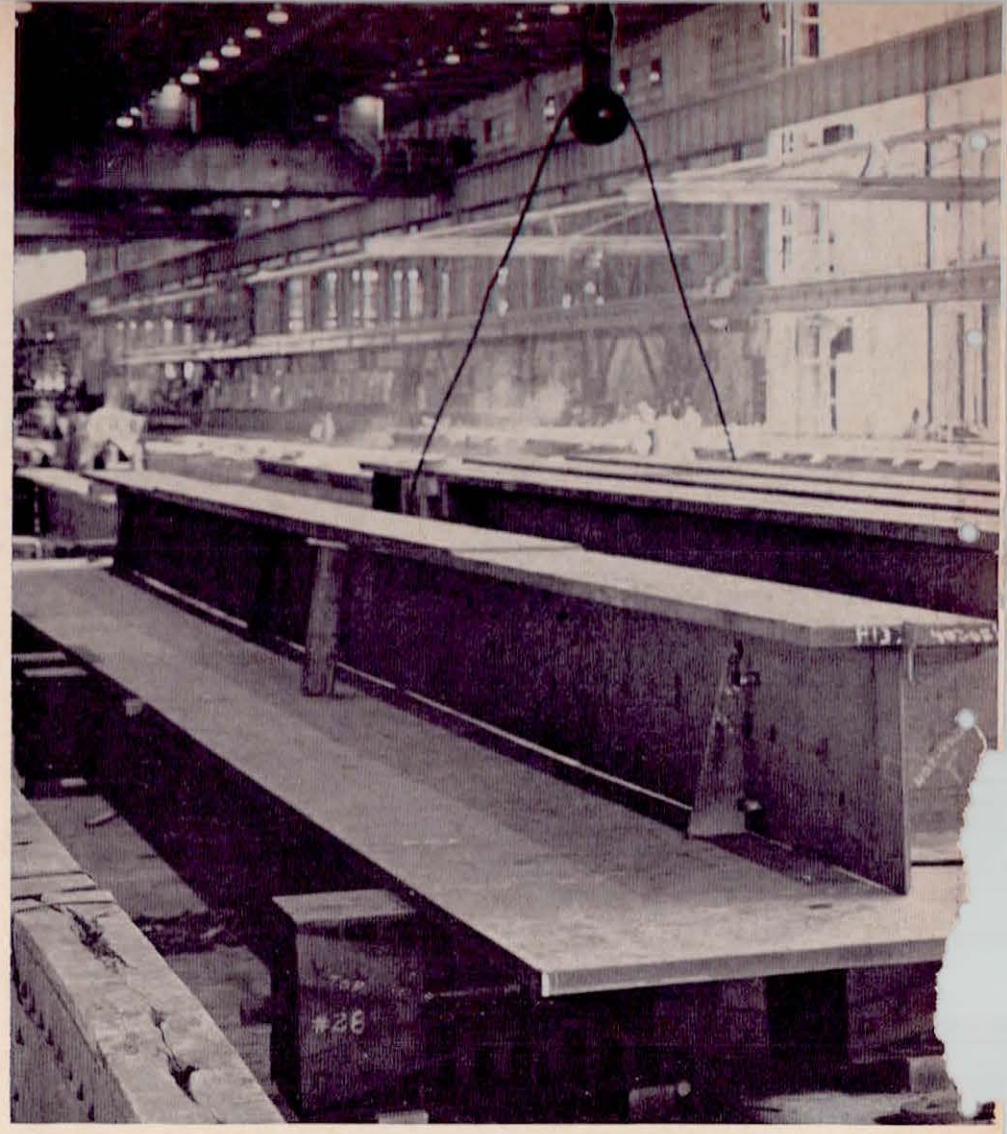
These same facilities, capable of handling complete cars, have already been committed for the repair of damaged cars by a private-car operator. With prospects for maintenance of additional privately owned cars in the future, BF&F officers are expecting to keep their car shops busy.

In addition to forming and fabricating to customers' specifications, BF&F has been engineering some car components, taking special advantage of its manufacturing capabilities. In the course of the first production run of FGE underframes, the idea developed of forging draft stops—center-sill parts normally cast or fabricated by welding. This has proved so successful that this is now a stock item being supplied to railroads and carbuilders. A combination forged-and-welded center-plate assembly for sliding-sill cars is another popular item developed by BF&F engineers.

"We are still having the trials and tribulations of a new corporation," says Catterall, "but we're on our way." And in a period when some manufacturers have been striving to reduce their over-all dependence on the railway market, Berwick Forge & Fabricating works steadily to increase its penetration in this field. ■

PRR uses all-welded bridges on big project

Undertaking on the four-track main line at Chester, Pa., will require installing 100 spans.



'UNITIZED SPANS' (above) used in PRR bridge job are fabricated upside down. Costs

A bridge-renewal and repair project now under way on the Pennsylvania's New York-Philadelphia-Washington main line is outstanding because of its scope.

But that's not its most outstanding feature. Its real significance lies in the design and fabrication of the new spans being installed. Not only were the spans designed for all-welded fabrication but several incorporate an entirely new concept in bridge design.

● **Heavy-traffic territory.** The project involves replacement of 10 four-track bridges totaling 100 individual spans and repairing and strengthening of 13 other bridges with a total of 120 spans. All the bridges are in the densely populated and industrialized Chester, Pa., area, which is in heavy-traffic electrified territory.

Of the new spans being installed, 84 are all-welded deck girders of conventional arrangement, ranging in length from 54 to 80 feet. Four spans are all-welded box girders 122 feet long. Twelve spans are of an all-welded "unitized" design. Features of this design are a wide, single top flange plate, three web plates, and three single bottom flange plates. The unitized design provided the answers to a number of problems encountered on the project.

● **Clearance problem solved.** One of the major problems solved by using the new design was that of providing adequate side clearance. Several of the bridges being replaced were of the common through-girder type having a restricting clearance between girder flanges. The new unitized bridge spans, being of deck-type design, eliminated this clearance problem without the necessity of spreading the track centers. This would have also required such things as extensive changes in the catenary system and bridge abutments, at considerable expense.

The question of clearances for street traffic was another problem solved by use of unitized girders. A factor in this problem was the desire of the railroad to eliminate the intermediate columns and bents at the curb lines. To do so with conventional girders of sufficient strength to carry today's cars would have required members of such depth as to severely reduce roadway clearance under the bridge. Or, had the headroom been maintained at its present height, it would have been necessary to raise the track several feet, a measure the railroad wished to avoid because of the excessive cost.

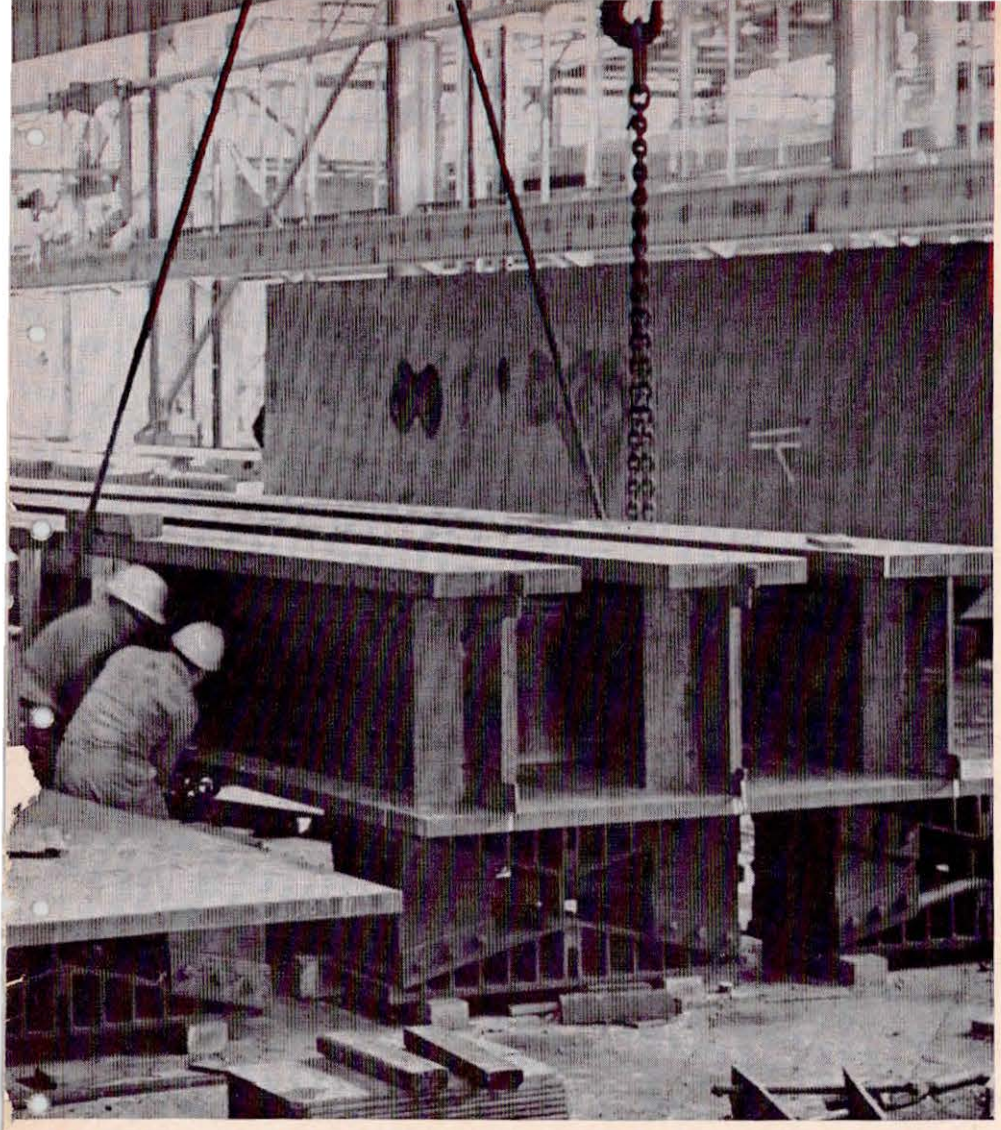
The all-welded unitized design provided a structure of shallow depth with adequate strength to permit a clear span between abutments. At the same time, the existing overhead clearance was maintained for street traffic. Also, the live-load deflection was maintained within allowable limits.

● **Spans easy to erect.** Another factor favoring the new design was the ease and speed of erection. For one thing, its use made it unnecessary to erect the intermediate column bents required by conventional girder construction. For another, the unitized spans, it is pointed out, are easily seated on the abutments and the track can be quickly restored with a minimum of delay to traffic.

All the new welded spans being installed are designed for Cooper's E72 live loading with AREA impact for diesel and electric locomotives. Studies by the railroad are said to have shown that all-welded design is equal or superior to conventional riveted girder construction. The railroad expects that maintenance costs for the all-welded structures will be substantially lower than for a riveted design. The lack of rivets, the use of single heavy flange plates and the reduction in single exposed pieces are mentioned as contributing to the lower costs.

All of the spans were fabricated at Bethlehem Steel Corp.'s Pottstown, Pa., works using modern welding equipment and techniques.

● **Details of unitized spans.** The 12 all-welded unitized spans were built using top flange plates 102 inches wide, 2½ inches thick, and 65 feet long,



of maintaining all-welded structures are expected to be lower than for riveted design.

with three built-up Ts welded perpendicular to the lower side. These Ts, which form the webs and lower flanges of the completed span, are spaced 3 feet, 3 inches apart and run the full length of the span.

The Ts were fabricated from 30-inch by 11/16-in. web plates (flame cut to give the specified camber) welded to flange plates 24 inches wide by 3½ inches thick on eight of the spans. On the four other spans the flange plates are 24 inches wide by 3½ inches thick for the center half of the T and 24 inches wide by 2½ inches thick for a quarter of the span length at each end. The flange plates were butt welded for 100% strength of the thinner plate to form a continuous flange.

Eight diaphragms 26 inches deep, also built-up Ts, are spaced 7½ feet apart between the webs. These diaphragms are welded to the underside of the top flange plate and to the webs of the main T sections. End bearing stiffeners are 8-in. by ⅝-in. plates welded to the main web plates and milled to bear on both top and bottom flange plates. Full-penetration butt welds are used for web-to-flange construction. Fillet welds are used for connecting diaphragms and stiffeners to the webs and top flange.

To insure a level bearing surface, the ends of the bottom flanges were milled to depth after all welding had been completed. Special attention was given to keeping the top flange plates as flat as possible during fabrication to provide a suitable bearing surface for the track ties.

The all-welded, unitized spans weigh 73 tons each.

● **Make-up of box girders.** The four all-welded box girders are 122 feet long. These girders have top and bottom flange plates 102 inches wide. The two web plates are 116 inches deep and are spaced 6½ feet apart. Diaphragm plates are spaced 16 feet, 9 inches apart and have manholes for access and inspection. Additional intermediate plate stiffeners were placed on the interiors of the spans. Except for bearing stiffeners at each end of each girder there are no exterior stiffeners.

All connections in the box girders were made by welding, except that the diaphragms are bolted to the bottom tension flanges. Each of the box girders weighs about 110 tons.

● **All paint applied in shop.** All the welded spans were given four coats of paint in the shop to save the time and cost of painting in the field after erection. Special lifting lugs, designed to fit erection crane shackles, were welded to the top of each span to expedite erection procedures.

Bethlehem utilized up-to-date welding methods in fabricating all the spans. Track-mounted manipulators were used to weld the Ts after they were assembled in a hydraulic fitting jig. The 102-in.-wide top and bottom flange plates were butt-splice-welded while clamped in a vertical position. Submerged-arc machine welding was used extensively in fabrication of all spans.

A rigid inspection program was maintained to insure high-quality welding in all cases. Sonic testing, and X-ray and magnetic particle inspection methods were used where applicable to check the quality of finished welds.

The railroad used 10-ft-long crossties dapped ¾ inch at each end to fit over the 102-in. flange plates. Spring-loaded hook bolts were used on every third tie.

Ties were placed on the structures by the railroad's forces while they were being held in the construction yard, waiting for shipment to the site for placement.

● **How they are installed.** Preparatory to placing each new span, the railroad removes the old span. The bridge seats are then reconditioned, stone abutments grouted and repointed, and necessary track and grade adjustments made.

All installation work is done on Sundays, when traffic is lightest. Two 150-ton-capacity work cranes are assigned to the work.

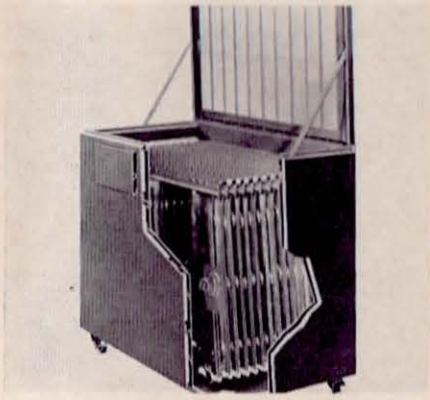
In addition to the track that is out of service for span replacement, two adjacent tracks are assigned for work trains, leaving the fourth track to handle all traffic for the duration of the job. Power in the three overhead catenaries is shut off.

Cars loaded with the spans to be placed are then spotted for unloading by the work cranes which, working in unison, move the span into position and place it on the abutment seats.

The hitch plates are then burned off, the end ties pulled into position and secured, rails are spiked down and the track goes back into service with a minimum of delay.

The spans being installed at Chester are all of the open-deck type. The railroad is presently designing an all-welded bridge of unitized design which will have a ballasted deck. ■

NEW PRODUCTS REPORT



Drawing File (RA-1)

The 1965 model Planfile is a suspension-type trunk file which will hold 3,000 to 5,000 sheets up to 36 by 48 inches in size. Engineering drawings, artwork, large negatives and photoprints, irreplaceable records, fragile documents, maps, charts, can be preserved conveniently.

Accessibility is a major advantage of the Planfile. A folder can easily be raised and opened to a particular sheet, for quick reference or to make simple changes, without having to remove the sheet. Visibility is another feature of the waist-high Planfile. The user looks down upon its entire contents the moment the cover is raised. The new Planfile has a floating, feather-touch cover, counterbalanced by a spring-loaded, stainless steel cable. Fire protection is achieved by double steel-wall construction enclosing aircell asbestos which completely surrounds the inner case. A secondary air space inside the cabinet prevents sheets from touching any of the six sides. *Art Metal Inc.*

Detector Reporting (RA-2)

A new hotbox detection transmission system permits the transmission of sensor information and recorder controls and system alarms from three dual trackside locations over a 3-kilocycle bandwidth. Designated the 960A journal data transmission system, the fully transistorized equipment meets both GRS and Servo trackside and recorder interface requirements. The system works equally well on all transmission facilities including wire line, cable and microwave radio.

The supervisory feature of the 960A can be used to actuate a recorder when a train approaches its associated sensor. It may also be utilized in such a manner that a small number of recorders, located in a centralized control center, could serve a large number of sensors.

If desired, the 960A can transmit sensor information from one trackside location and in addition carry a voice channel through the utilization of Lenkurt's 5249A speech plus data panel. *Lenkurt Electric Co., Inc.*

Mobile Welder (RA-3)

Repairs are speeded on New York Central passenger cars at the Chicago coach yard by the use of the Welding Truckster, a three-wheel vehicle. The 50-in.-wide unit, which readily operates between adjacent tracks, features a Hobart power welder with an output rating of 225 amp at 25 volts on a 100% duty cycle. An auxiliary a-c power supply of 5-kw capacity, single-phase, 110- and 220-volt and 60-cycle current, can be used for emergency lighting and extra power. Fully equipped, the unit has oxygen and acetylene tanks for gas welding and cutting that may be needed in replacement or salvage operations. There are also two side utility boxes for hoses and electric cables, and a rear utility box for supplies. The welder averages 9 to 10 hr service a day in the 10-acre Chicago yard where fourteen trains are made up each day. Prior to acquiring the Truckster, a welding unit was pulled through the yard behind a tractor. Other Truckster units are used in NYC Indianapolis and Cleveland operations for supervisory transportation. *Cushman Motors.*

RAILWAY AGE WEEKLY

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Midwest railroads dry out

The Mississippi went up, the Mississippi went down—and when the river's worst rampage in history tapered off, midwestern railroads were right back in business.

With few exceptions, rail bridges across the upper Mississippi were back in service by the middle of last week. The intricate reroutings of a week earlier were almost all eliminated. Operations in the Minneapolis-St. Paul area were nearly normal, and the Milwaukee's Pig's Eye yard near St. Paul went back into full operation May 5.

Hardest hit of all western lines seemed to be Burlington, though Milwaukee and Illinois Central also had extensive damage. Burlington's Chicago-Twin Cities operation was in reasonably good shape, but a break in the main-line river crossing opposite Burlington, Iowa, was forcing a detour on the road's Chicago-Council Bluffs route.

IC's east-west line—scene of heroic efforts to battle the river—finally went under at Dubuque, Iowa, with the expectation that it would be back in use April 29 or 30. So what did IC do? Just got the line in service again before midnight April 28.

Flood damage estimates were still not available—and, as one observer noted, roads in the flood zone may actually be paying the cost for the next year or two, in the form of accelerated maintenance (such items as ballast cleaning) which could have been scheduled later had the flood not occurred.

One of the biggest problems facing a flood-hit road may belong to Great Northern. GN lines weren't damaged—but its massive stone-arch bridge across the Mississippi at Minneapolis may pose another problem. One pier of the bridge (Empire Builder James J. Hill once called its construction "the toughest job I had") appears to have been undermined. Full extent of the damage probably won't be known until divers can make underwater inspection. Meanwhile, GN is rerouting traffic—and hoping for the best.

The pier itself is not out of line. But there is a noticeable dip in the track at the point where subsidence has occurred. By one estimate, the bridge may remain out of service about six months. ■

RAILROADING AFTER HOURS WITH JIM LYNE

LYNE

THE GOOD OLD DAYS?—I've just been running through the new edition of Freeman Hubbard's classic, and richly illustrated, book on old-time railroading, "Railroad Avenue" (Golden West Books, San Marino, Calif.) Here are all the standard stories of long-ago railroading—Jawn Henry, the fabulous artist with the drill hammer; Casey Jones; the wreck of the old 97; Kate Shelly; and of Jesse James, the train-robber.

There is a fascination to such yarns as these for some people and there are others who belittle them—but, they are entertaining. Moderate doses, I'd suppose, in learning about them gives a railroader a healthy appreciation of the rich tradition he has inherited. The recent floods have called out (and found) the courage and resourcefulness of present-day railroaders—by duplicating the conditions that were far from infrequent in average railroading 50 or more years ago. And wartime railroading (as members of the Military Railway Service know) reproduces conditions of 1900 and before, more often than those of standard present-day railroading.

We live for the present and future—not for the past that cannot be changed. But knowing what that colorful past was helps, whenever it is seen in true proportion.

Too much attention to the old days is an escape from reality—but so is eagerness for innovation for its own sake.

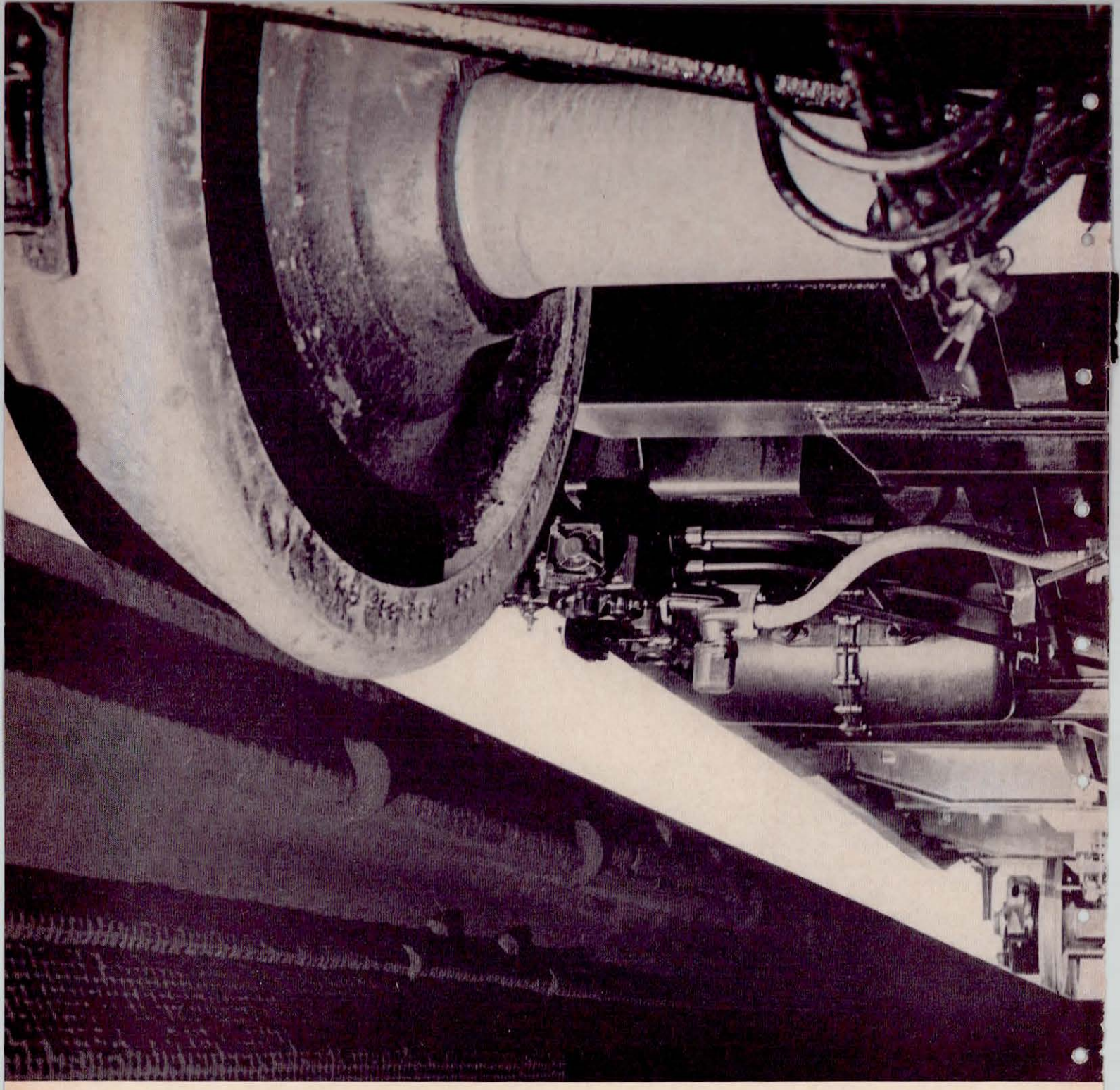
DIFFERENCE BETWEEN '64 AND '24—On the D&H the two years 1924 and 1964 were much alike, in some respects: Same ton-miles, almost the same freight revenue, and almost the same average charge per ton-mile. That is, there was the same average price for freight service in both '64 and '24—says President J. P. Hiltz. And then he points out a few differences: freight train-miles down 59% and average trainload up 144%. That's how the D&H kept its prices down with improved efficiency—CTC, mechanized maintenance, and diesels (145 of them compared with 1924's 480 steamers). So the output per employee rose 376%, and the company was able to pay average wages of $2.95 an hour, compared with 72¢ in 1924. With such vitality in improving efficiency, how these railroads would go to town, except for government-favored rivalry which held 1964 traffic volume down to the '24 level!

PAYING PASSENGERS TO RIDE—Economist William Vickery calculates the taxpayers' contribution to urban rush-hour commuters by automobile at 10¢ per mile per car. So a 25-mile motorist gets a present of $5 a day (less whatever toll charges he may pay). If train riders were subsidized in comparable degree, they could ride the trains for nothing, and get paid, besides, for traveling by rail (see Consumer Reports magazine, March 1965, p. 130). This simple statement, it seems to me, puts the whole urban transportation problem in a nutshell. People are now paid to travel by means which are the least desirable from the standpoint of community welfare. This observation holds, of course, only for the largest communities. In the smaller cities, the auto is usually the more economical way for most people to get around.

LARGEST RAILROAD-LESS TOWN—The biggest city without passenger train service (so far as I can learn from information sent me) would appear to be New Bedford, Mass. (population 102,000). This, of course, refers only to completely independent communities. If places within metropolitan areas (such as Long Beach, Calif.) were counted, there would be other contenders to consider.

Victor Konigsberg of San Diego believes that Key West is now the largest U.S. city with no railroad service whatever—but it got that way by reason of a hurricane, not because of the disappearance of its traffic. VK also believes that Farmington, N.M. (23,800), is the largest town to be served exclusively by a narrow-gauge line (freight service only, according to the Official Guide).

Noteworthy among highly populous areas with no through passenger-train service is the Cleveland-Pittsburgh route. As I recall, it was the transfer of mail from the trains to the highway that pulled off this service (a not uncommon occurrence).



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Have your ACF representative explain all the profitable advantages that ACF Precision Design Boxcars offer you. Call or write American Car & Foundry Division, ACF Industries, Incorporated, 110 Clark Street, St. Charles, Missouri 63301, or our sales offices in New York, Chicago, Cleveland, St. Louis, San Francisco, Washington, D.C.

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$1.47 Billion: How It Was Spent

Purchases of Fuel, Material and Supplies
Railroads of Class I—Calendar Years 1964 and 1963

	Item	1964	1963
FUEL			
1.	Fuel oil—Diesel	$ 330,182,000	$ 340,885,000
2.	Fuel oil—Residual	11,020,000	11,041,000
3.	Coal (anthracite and bituminous)	9,193,000	9,396,000
4.	Gasoline	12,041,000	12,355,000
5.	All other (coke, wood, etc.)	2,345,000	1,983,000
6.	Total fuel	364,781,000	375,660,000
FOREST PRODUCTS			
7.	Cross ties	$ 47,285,000	$ 37,192,000
8.	Switch ties	5,520,000	4,938,000
9.	Lumber (bridge and building, piling, posts, bridge ties)	16,062,000	15,916,000
10.	Lumber, equipment (including manufactured articles)	22,801,000	21,168,000
11.	All other forest products	5,545,000	6,208,000
12.	Total forest products	97,213,000	85,422,000
IRON AND STEEL PRODUCTS			
13.	Rail (new and secondhand, except scrap)	$ 48,662,000	$ 37,762,000
14.	Axles, tires and wheels for cars and locomotives	57,917,000	60,148,000
15.	Track and switch material	67,795,000	59,256,000
16.	Steel bridges, turntables, sheet piling	2,827,000	3,439,000
17.	Iron & steel (bars, shapes, sheet, flues & tubing, chain & wire netting)	30,622,000	25,606,000
18.	Locomotive forgings & castings (gray iron, malleable or steel, & trucks)	6,498,000	8,668,000
19.	Car forgings & castings (gray iron, malleable or steel, brake beams, couplers, draft gears, metal car roofs, auto loaders & trucks)	140,028,000	120,066,000
20.	Bolts, nuts, washers, rivets, lags screws, pins and studs	7,978,000	8,511,000
21.	Springs, elliptical and helical, for cars and locomotives	6,333,000	6,004,000
22.	Tools, track & roadway, all kinds, & parts (except automotive equipment, aircraft, & parts)	11,161,000	10,971,000
23.	Machinery and parts	22,214,000	21,134,000
24.	Pipe, iron and steel, pipe fittings, and plumbing fixtures	6,914,000	6,816,000
25.	Hardware, hand and small machine tools	22,545,000	21,618,000
26.	All other iron and steel products (including cast iron water pipe and culvert pipe)	5,965,000	6,209,000
27.	Total iron and steel products	437,459,000	396,208,000
MISCELLANEOUS			
28.	Building materials (brick, cement, gravel, lime, sand, stone, roofing, siding and fencing)	$ 7,172,000	$ 7,145,000
29.	Illuminating oils, lubricating oils and greases, journal lubricating pads, wiping rags and waste	47,236,000	44,054,000
30.	Non-ferrous metal and products	25,129,000	24,091,000
31.	Ballast and riprap	17,425,000	15,858,000
32.	Electrical materials (incl. electrical material for diesel locomotives)	56,894,000	56,404,000
33.	Stationery, printing and office supplies	30,663,000	28,081,000
34.	Commissary equipment and supplies	16,623,000	18,765,000
35.	Rubber and leather goods	7,424,000	7,795,000
36.	Chemicals, compounds, drugs, glass, laboratory equipment, lacquers, painters' supplies, paints, varnishes	43,206,000	42,069,000
37.	Passenger car trimmings	15,348,000	11,811,000
38.	Locomotive, train and station supplies	26,606,000	26,301,000
39.	Communication and signal material	48,361,000	51,198,000
40.	Air brake material	22,155,000	18,586,000
41.	Appliances for locomotives	5,425,000	5,776,000
42.	Automotive equipment and aircraft, and parts	14,014,000	13,662,000
43.	Diesel material not elsewhere classified	95,057,000	95,229,000
44.	All other miscellaneous	97,408,000	77,309,000
45.	Total miscellaneous	576,146,000	544,134,000
46.	Grand total	$1,475,599,000	$1,401,424,000

Source: Reports of the carriers to the Bureau of Railway Economics.

Railroad purchases highest since 1957

The $1.47-billion outlay in '64 was third straight annual rise.

Railroads last year spent $1,475,599,000 for fuel, materials and supplies. The purchases were up 5% over the 1963 total of $1,401,424,000.

The railroads' purchases, made from a broad cross-section of U.S. industries, reflected the continuing increase in rail traffic. The purchases were the highest since 1957, the Association of American Railroads said in announcing the figures. Last year's purchases, the AAR pointed out, represented the third consecutive annual increase in such spending, although they were one-third below the 1948 high. Railroads in 1948 spent $2,183,331,000.

● **Capital outlays excluded.** Not included in the 1964 purchase figures was the record annual spending by railroads of $1,417,000,000 for capital equipment and improvements. An additional $300,000,000 in allied firm's purchases of rolling stock brought to almost $3,200,000,000 railroadings' over-all contribution to the nation's burgeoning economy.

Iron and steel products accounted for the largest share of the 1964 increase in railroad purchases. Railroads spent $437,459,000 last year for rails, locomotive and car parts, and machinery of all kinds. The 1964 total was an increase of $41,251,000, or 10.4%, over expenditures for comparable materials in the preceding year.

● **Forest products up 13.8%.** The largest percentage increase in railroad purchases last year was registered in the forest-products category. The category includes ties, bridge and building lumber, and similar items. Railroads spent $97,213,000 for such materials in 1964. This was an increase of 13.8% over 1963 purchases.

Spending for miscellaneous supplies like building materials, ballast, office and train supplies, and communication and signal material, totaled $576,146,000, a 5.9% increase over 1963. ■

'Measuring' clearances

(Continued from page 19)

such as a railroad bridge, and the name of the river or creek crossed by it.

These initial data are placed on the Structure Code Sheet by the engineering department, after which it is sent to the auditor of mechanized accounts nine floors below, where it is keypunched on cards and used to build the master tape.

● **How requests are processed.** When a high-wide load request is received in the engineering department, a Form "Y" or "Z" is filled out. Form "Y" is for cars other than tank cars; Form "Z" is for tank cars. These forms show the dimensions of the load in feet and inches; also the truck centers of the car, its weight, and the route the car will take between two specific stations by accounting department number. The form is then tubed to the auditor of mechanized accounts nine floors below, who key-punches a card with data shown and places it in the 1410 machine for comparison and calculation against the master tape.

The machine makes all necessary calculations and prints information necessary for return to the engineering department for distribution. Clearance data are calculated by the IBM machine to the nearest tenth of an inch. Previously, engineering department measurements were made to the nearest one-half inch. If revisions are made in the clearance outline or a particular structure is eliminated, structural data can be changed on the basic master tape whenever necessary.

"Under our previous practice," says Shoemaker, "one of our more experienced draftsmen spent all his time on clearance calculations. The new computer method frees one draftsman and will make for simplified, quick handling, and lessen chance for error in high-wide load requests. Further, any of our draftsmen can handle the requests even though they may not be specialists in the records covering existing clearance restrictions."

● **Improvements planned.** The current method of handling is to accumulate high-wide load requests and tube them to the computer room at 10:00 am, 1:30 pm and 4:30 pm daily. However, consideration is being given to providing a register in the engineering department on the twelfth floor of the Northern Pacific building at St. Paul (the computer room is on the third floor), which will make it possible to transmit clearance requests at any hour of the day and directly into the computer. ■

(Product Reference 29A)

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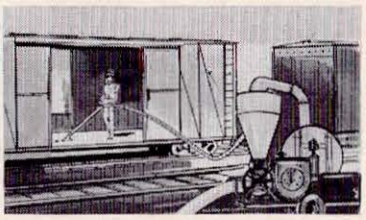

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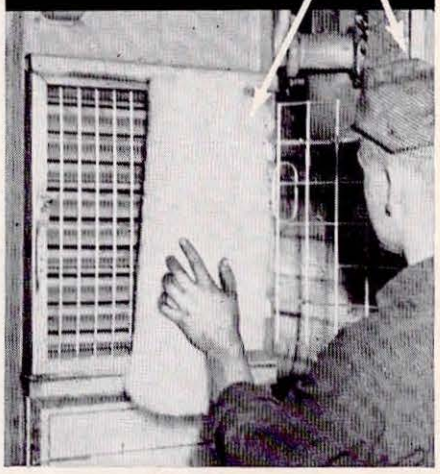

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(Product Reference 29B)

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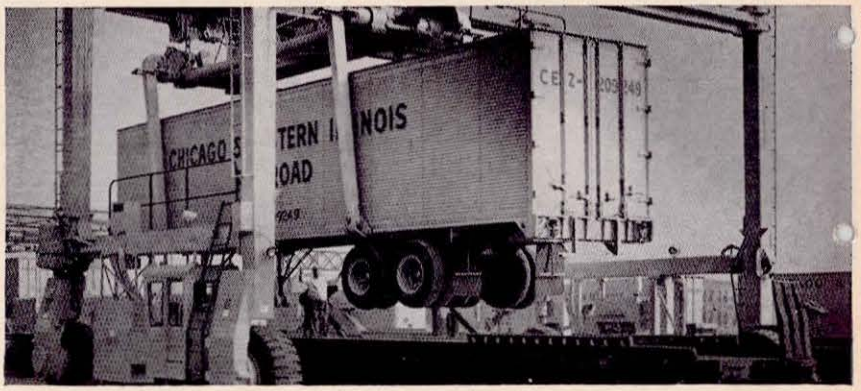
The C&EI: Pulling ahead

The Chicago and Eastern Illinois Railroad, operating 860 miles of railroad in the Chicago hub of railroads and highways, is meeting the double challenge from competing railroads and truck lines. How? With the newest in specialized cars, equipment and service. Results? Tangible benefits for its customers and increased profitable tonnage for itself.

To improve piggyback service, for example, the C&EI in 1962 introduced the crack "Dixie Piggyback Flyer." Operating as the second section of the "Dixie Flyer"—the famed passenger train—on daily runs between Chicago and the South, it operates on passenger schedules to provide far faster service than ordinary piggyback freights. And recently the C&EI installed a high-speed traveling crane, shown below, that can load and unload trailers in 60 to 90 seconds. Other new specialized equipment includes high-cube cars, open hopper cars specially adapted for the safe transport of grain, and completely unitized coal trains.

Most important, perhaps, the C&EI has been purchasing new, more powerful locomotives. The outstanding performance of this fleet is in part due to the control exercised by

MEETING THE RUSH. The C&EI here uses a specially devised moisture-proof cover on open hopper cars, allowing them to safely carry grain. The result? Far more cars available to customers during peak grain seasons.



THE FASTEST ANYWHERE. The C&EI recently acquired this new high-speed all electric traveling crane, the Le Tourneau Strad-L-Port. It can load a trailer onto a flat car in 60 to 90 seconds. The only one of its kind, it gives C&EI piggyback customers the fastest loading service available anywhere today.

over 860 miles of track. Above: New, powerful GP-35 units move out pulling the "Dixie Piggyback Flyer."

# of double competition

their Test Laboratory at Danville. In addition to the usual control tests on fuels and lubricants, use is made of specialized equipment such as Millipore filtration and Atomic Absorption Spectro Photometry.

Mobil is happy to be a supplier of fuels, lubricants, and technical know-how to the C&EI. The new Mobil half-ashless oil is proving its benefits in both the new turbo-charged, high horsepower engines as well as the general fleet. It all helps the C&EI to stay out in front of the truck and rail competition pulling south from Chicago.

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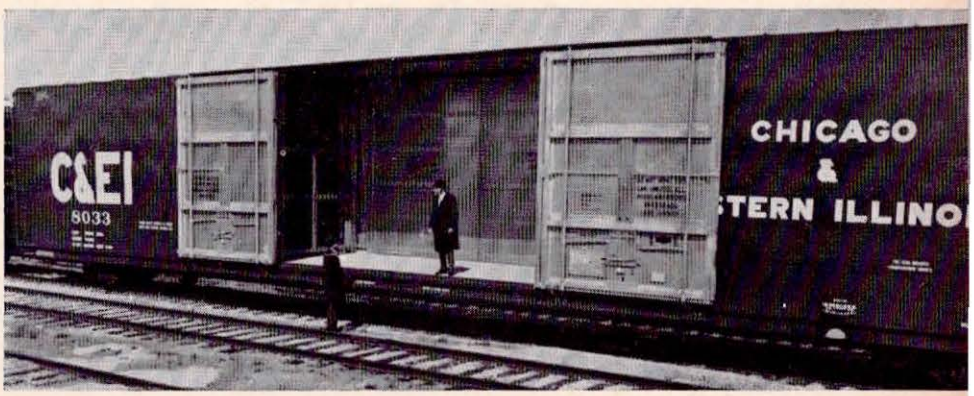

FAR MORE AUTO PARTS. This new high-cube car, one of a group recently purchased by the C&EI, can carry a far bigger load of auto parts. The size of the men in this picture graphically illustrates just how big these cars really are. The car shown here is waiting to be loaded with auto parts at the Ford Plant in Chicago Heights, Illinois.

RPI's new head plans for 'public-relating'

Promoting greater public understanding of the need for railroads and suppliers is a prime aim of RPI's President Lennartson.

The first day on a new job can be a trying experience for almost anybody, Nils A. Lennartson says. But when you've been elected president of a national association of railway equipment and supply companies and almost your entire previous work experience has been in government, that first day can be especially wearing.

Lennartson's first day as president of the Railway Progress Institute—Monday, April 19—was a lulu. Beginning promptly at 9 a.m. when he walked into his new office in Chicago, the day was a continual round of conferences, staff briefings, meetings and interviews, topped off with a press conference at 5 o'clock and a Western Railway Club dinner in the evening.

Interviewed for Railway Age by Purchases and Stores Editor Philip F. Van Pelt, Lennartson candidly admitted that his record of service in several key government public affairs posts is an unusual background for a man selected to lead the supply industry as president of the RPI. But his virtual lack of experience won't be a handicap, he says.

● **A matter of understanding.** "Our goal here at RPI," says Lennartson, "is to promote greater public understanding of the need for railroads and suppliers alike. The techniques for creating that understanding are largely the same, whether you're talking about railroads and their suppliers or about anything else."

Nils A. Lennartson

Lennartson's qualifications as a public-affairs expert are impressive. From 1948 until 1952 he served as special assistant to the Secretary of the Air Force with responsibilities in the public relations field. The following year he became director of information for the U.S. Department of Commerce, and from 1953 until 1961 he served as assistant to the Secretary of the Treasury with responsibility for public affairs and relations with Congress. Since 1961 until his appointment to the RPI presidency, he has been deputy assistant U.S. Secretary of Defense for public affairs.

During his years in government, Lennartson three times was cited for his excellent service.

● **Getting to know you.** Asked what plans the institute has either for expansion of its membership or for greater participation by individuals in meaningful committee activity, Lennartson says he doesn't yet know for sure. "After all," he said, "this is my first day on the job. I'll have to do a lot of homework for a while, getting to know the railroad industry, the supply industry and the institute itself. Later, I ought to have a better idea of what we can do and where we're going."

But Lennartson is definite in his opinion of the value of the railroad industry—and of the supply industry, gleaned perhaps from his brief experience on the public relations staff of the Maine Central some 20 years ago. "I learned a long time ago that railroads are essential to the country, not only as vital lifelines of transportation and communication, but also—and this includes suppliers—as keystones of the nation's economy through their widespread investments and in their role as major taxpayers."

Lennartson's election—by unanimous vote of the RPI executive committee—capped months of speculation as to the identity of the man who would succeed Holcombe Parkes in the top RPI post. In announcing selection of Lennartson, RPI Chairman Arthur H. Smith, president of the Kerite Co., New York, recalled that W. Lyle Richeson, vice president of Westinghouse Air Brake Co., "several months ago was chosen chairman of a selection committee . . . The committee, after screening and interviewing numerous applicants, discussed its findings with the executive committee. [Lennartson] was selected from a considerable number of eminent railroad, supply company, general business and government officials who were candidates."

Smith also announced, coincident with Lennartson's first day on the job, that Rodney A. Harris, RPI manager of services since 1963, has been appointed as the institute's treasurer. RPI staff member Doris Kewin continues to serve as assistant treasurer. ■

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MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended May 1 totaled 600,672 cars, the Association of American Railroads announced on May 6. This was an increase of 21,960 cars, or 3.8%, compared with the previous week; an increase of 40,669 cars, or 7.3%, compared with the corresponding week last year; and an increase of 9,462 cars, or 1.6%, compared with the equivalent 1963 week. Ton-miles generated by carloadings in the week ended April 24 are estimated at 13.8 billion, an increase of 10.3% over the corresponding week of 1964 and 9.9% over 1963.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, May 1

District	1965	1964	1963
Eastern, including Allegheny and Pocahontas	247,440	230,332	241,281
Southern	121,807	105,420	116,596
Total Eastern and Southern Districts	369,247	335,752	357,877
Northwestern	79,013	75,476	77,479
Central Western	113,512	111,519	115,291
Southwestern	38,900	37,256	40,563
Total Western Districts	231,425	224,251	233,333
Total All Roads	600,672	560,003	591,210
Commodities:			
Grain and Grain products	46,823	44,858	51,415
Livestock	2,430	2,599	4,446
Coal	110,465	106,031	109,735
Coke	8,839	7,565	9,064
Forest Products	38,938	35,743	36,984
Ore	49,048	45,014	37,469
Merchandise l.c.l.	9,821	12,914	18,146
Miscellaneous	334,263	305,279	323,951
May 1	600,672	560,003	591,210
Apr. 24	578,712	565,643	577,024
Apr. 17	555,162	576,343	561,261
Apr. 10	564,637	522,572	556,081
Apr. 3	548,714	513,822	546,021
Cumulative total, 18 weeks	9,678,616	9,452,929	9,430,709
Estimated revenue ton-miles (billions) 18 weeks	228.8	219.6	204.9

PIGGYBACK CARLOADINGS.—U.S. piggyback loadings for the week ended April 24 totaled 18,927 cars, compared with 16,933 for the corresponding 1964 week. Loadings for 1965 up to April 24 totaled 316,797 cars, compared with 272,066 for the corresponding period of 1964.

IN CANADA.—Carloadings for the seven-day period ended April 14 totaled 70,869 cars, compared with 70,419 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
April 14, 1965	70,869	26,224
April 14, 1964	71,171	24,400
Cumulative Totals		
April 14, 1965	1,019,854	360,450
April 14, 1964	1,023,878	377,372

FREIGHT-TRAIN CARS

► *Erie Lackawanna.*—Ordered 97 60-ft, 70-ton, cushioned box cars from ACF at a cost of $1.8 million. Cars will be equipped with 10-ft sliding doors.

► *Pyrofax Corp.*—Is acquiring 20 33,300-gallon-capacity, pressurized tank cars from ACF. Shippers' Car Line, ACF's sales and leasing division, reports that the LP gas firm is the first customer for the new "Rail King" tank cars.

► *Rock Island.*—Ordered 150 70-ton flat cars from ACF for third-quarter delivery. Cars will be equipped with Freightmaster cushioning devices.

► *Southern.*—Ordered 1,000 50-ton, 50½-ft, all-steel single sheath box cars from Pullman-Standard at a cost of $12.5 million. Cars will have nailable steel flooring, 10-ft sliding steel doors, roller-bearing trucks, and neoprene interior coating to control condensation on inner surfaces. Deliveries will begin Oct. 1 and be completed in December.

PIGGYBACK

► *Berman Leasing Co.*—Ordered 63 refrigerated and 80 dry van trailers from Highway Trailer Industries at a cost of $1.4 million. The refrigerated trailers will be added to Berman's fleet leased to the Chicago & North Western for piggyback service.

► *Canadian National.*—Ordered 50 flat cars from Napanee Industries, Ltd., for piggyback service. Delivery will be made this month.

LOCOMOTIVES

► *Richmond, Fredericksburg & Potomac.*—Ordered 13 2,500-hp GP-35 locomotives from EMD at a cost of $2.1 million.

PURCHASES & INVENTORIES

► *January Purchases Down 3.6%.*—Purchases by domestic railroads of fuel, material and supplies in the first month of this year were $4,560,000, or 3.6%, lower than in the corresponding month of 1964. Purchase and inventory estimates in the following tables were prepared by Railway Age.

	January 1965 (000)	January 1964 (000)
PURCHASES*		
Rail	$ 8,601	$ 5,215
Crossties	3,891	3,558
Other Material	78,100	84,561
Fuel	30,995	32,813
Total	$121,587	$126,147

*Subject to revision.

	January 1, 1965 (000)	January 1, 1964 (000)
INVENTORIES* †		
Rail	$ 30,751	$ 29,495
Crossties	46,545	54,713
Other Material	324,335	318,459
Scrap	22,264	23,076
Fuel	25,255	21,924
Total	$449,150	$447,667

*Subject to revision.
†All total inventory figures taken from ICC statement Q-125 for month indicaed.

YOU OUGHT TO KNOW

For PR excellence: From 1,000 public-relations case histories published in the last 20 years, Public Relations News has selected 20 as outstanding—and three of the winners come from the railroad industry. The Chesapeake & Ohio, the Long Island, and the Association of American Railroads received awards at an April 27 luncheon in New York.

March fines: Fines totaling $24,450 were paid in March by 26 railroads for violations of the Safety Appliance, Hours of Service, Signal Inspection, Accident Reports and Explosives and Combustibles Acts. Biggest payers, according to the ICC, were the Baltimore & Ohio, $3,950; Illinois Central, $2,750; and Southern Pacific, $2,250.

A $4.7 million Reading experiment: The federal government has approved a $2,977,000 mass transportation grant for an 18-month demonstration on the Reading. The federal funds will be matched by $1,598,500 from Philadelphia and three surrounding counties, and $166,500 from the state. Reading President Charles E. Bertrand said the grant assures Reading suburban passenger service for the next 18 months.

Transit in the capital: "America Looks at Rapid Transit" will be the theme of this year's annual meeting of the Institute for Rapid Transit in Washington May 18 and 19. A feature of the conference will be an exhibit of rapid transit and commuter cars at Washington's Union Terminal. On display will be cars of the Chicago Transit Authority, Port Authority-Trans Hudson Corp. (New York), and the City of Philadelphia.

ICC to study transport on new roads: The ICC has instituted an investigation to determine how motor carriers will be affected by the opening of the National System of Interstate and Defense Highways and other limited access roads. Among other things, the inquiry, docketed as Ex Parte No. MC-65, will consider what Commission rules may be required to govern use of such highways by bus operators and truckers now using less favorable routes.

Baltimore transportation program: In conjunction with National Transportation Week, the Transportation Committee of the Chamber of Commerce of Metropolitan Baltimore, Inc., plans a transportation conference May 18 in Baltimore's Sheraton-Belvedere Hotel. Theme of the conference is "Transportation Progress—the Challenge of Change!"

New freight-claim officers: The AAR Freight Claim Division, at its 74th annual session at Dallas May 4-6, elected A. H. Ducret, general freight claim agent for the Milwaukee, as chairman. He succeeds J. G. Goodrich, general freight claim agent for the Santa Fe at Topeka, Kan. The division also elected W. F. Paden, freight claim agent for the Western Pacific, as first vice chairman, and W. D. Hamilton, manager freight claims for the Pennsylvania, as second vice chairman.

A Super Continental divide: Canadian National expects the 1965 summer travel season to be the heaviest since the end of World War II, so it's taking steps to accommodate its passengers. From June 23 to Sept. 8, CN will operate its Super Continental as two separate and complete trains. One train will operate between Montreal and Vancouver, the other, between Toronto and Vancouver. Normally, the sections of the Super Continental running out of Montreal and Toronto are combined at Capreol, Ont. for the trip to the coast. The Super Continental and some other CN trains will also offer dormette sleeping car service.

Waterside plant development increases: Some 125 companies built new plants or expanded existing facilities on waterways in the first quarter of this year. The American Waterways Operators, Inc. said the growth for the period was the greatest since third quarter 1963, when 145 facilities were built or expanded. Chemical companies developed 39 of the waterside sites.

Truck tonnage: Intercity truck tonnage in the week ended April 24 was 1.8% over the volume of the previous week and 4.7% above the volume in the corresponding week of 1964, according to American Trucking Associations.

Current statistics

Net income	
12 mos., 1964	$699,000,000
12 mos., 1963	651,000,000
Carloadings, revenue freight	
18 wks., 1965	9,678,616
18 wks., 1964	9,452,929
Freight cars on order	
April 1, 1965	36,491
April 1, 1964	36,219
Freight cars delivered	
3 mos., 1965	18,865
3 mos., 1964	17,300
Serviceable cars	
March 1, 1965	1,406,712
March 1, 1964	1,411,426

Orvan E. Stevens
Burlington

G. E. Benoit
CPR

PEOPLE

ATLANTIC COAST LINE.—R. F. Murphy, assistant general superintendent transportation, Jacksonville, Fla., appointed manager car utilization there.

ALTON & SOUTHERN.—A. L. Lenny, vice president and general manager, East St. Louis, Ill., named to the newly created post of special consultant to the president. **John T. Daley,** chief mechanical officer, appointed assistant to the president—mechanical operations. **Ernest B. Hardwig,** superintendent, Operating Department, appointed acting manager of operations, with over-all responsibility for freight car classification, maintenance of way and mechanical equipment services. **Edward J. Maher,** director of personnel, succeeds Mr. Hardwig as superintendent, Operating Department. **Harry J. Foley,** assistant director of personnel, promoted to director of personnel. **Ewald Milkert,** assistant chief mechanical officer, appointed to the new post of superintendent, mechanical equipment.

BURLINGTON.—Orvan E. Stevens, assistant to general manager, Lines West, Omaha, named superintendent of transportation, Chicago.

CANADIAN NATIONAL.—Frank MacDowell, assistant chief architect, Montreal, promoted to chief architect there, succeeding **H. C. Greensides,** named consulting architect. **W. E. Brace,** senior architect, succeeds Mr. MacDowell as assistant chief architect.

J. J. Campbellton, superintendent transportation, Toronto Area, appointed assistant general superintendent transportation, Great Lakes Region, Toronto, succeeding **J. McFarlane,** retired.

H. R. LeVan, foreign freight sales assistant, Toronto Area, appointed administrative assistant, Great Lakes Region, succeeding **C. W. Sisson.**

CANADIAN PACIFIC.—G. E. Benoit, general manager, Atlantic Region, Montreal, promoted to vice president of that region, succeeding **J. U. Brazeau,** who retired April 30.

CHESAPEAKE & OHIO.—C. M. Amick, assistant superintendent transportation, Huntington, W. Va., appointed superintendent car distribution and utilization there. **C. E. Chappell** appointed supervisor coal train coordination, Huntington, succeeding **E. A. Pennington,** promoted to assistant superintendent car distribution and utilization, Huntington. **W. D. McDaniel,** mine rating commissioner, Huntington, appointed assistant superintendent transportation there. **A. R. Matthews** succeeds Mr. McDaniel as mine rating commissioner. **R. O. Clarke** appointed assistant to superintendent car distribution and utilization. **J. M. Krantz** named car shop superintendent, Grand Rapids, Mich.

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—H. Pier Clifford, staff assistant in C&O's public relations department, Cleveland, appointed assistant advertising manager of the affiliated C&O-B&O.

Charles R. Van Horn, B&O's resident Washington representative for government affairs, appointed Washington representative, C&O-B&O.

CHICAGO & NORTH WESTERN.—O. W. Brookes named superintendent, Lake Shore division, Green Bay, Wis., to succeed **R. C. Conley,** appointed superintendent-transportation, Chicago.

CHICAGO SOUTH SHORE & SOUTH BEND.—James B. McCahey, Jr. elected vice president, general manager, and a director, with headquarters at Michigan City, Ind. He was formerly president, **Dunn Coal & Oil Co.**

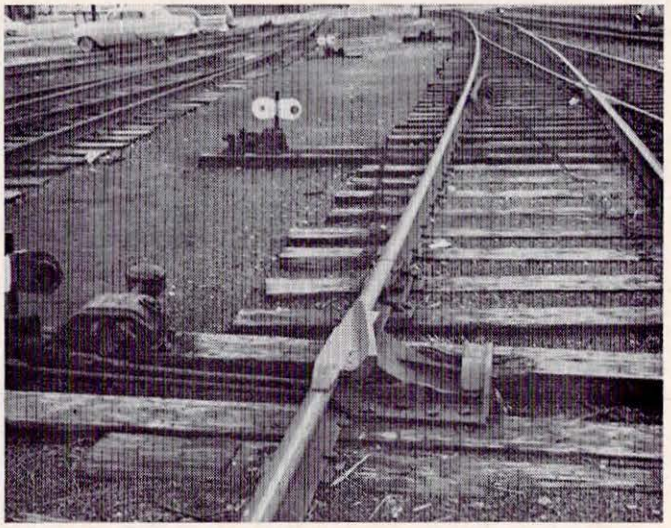
DENVER & RIO GRANDE WESTERN.—Alexis McKinney appointed director of public relations, Denver, Colo.

GREAT NORTHERN.—C. M. Koenigs, traveling passenger agent, Seattle, appointed general agent, passenger department, Spokane.

LOUISVILLE & NASHVILLE.—Frederick D. Reed appointed senior cost analyst. **Lawrence C. Thomas** appointed cost analyst. **Vernon M. Willinger** named junior cost analyst.

Wilber W. Carter, industrial agent, Louisville, retired after 46 years of service.

Edwin S. Middleton, passenger traffic rep-



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resentative, New Orleans, promoted to district passenger agent there, succeeding **Albert E. Jackson,** retired.

William F. Farley, district freight agent, Miami, Fla., appointed general agent, Atlanta, Ga. **C. Leon Methvin,** traveling freight agent, Charlotte, N.C., succeeds Mr. Farley.

Marion V. Healy, supervisor, loss and damage prevention, Evansville, Ind., appointed assistant director, loss and damage prevention, Louisville. **William A. Benton** succeeds Mr. Healy at Evansville.

Joseph L. Lenihan, general solicitor, appointed general counsel. **W. L. Grubbs,** vice president-law and general counsel, will continue as vice president-law. **Frank D. Burke,** secretary, named administrative assistant to the president. **C. Hayden Edwards** appointed secretary in addition to general attorney.

NEW YORK CENTRAL.—Robert S. Reebie, vice president—planning and development, New York, has resigned, effective May 31, to reenter consulting practice. Mr. Reebie will establish the firm of Robert Reebie & Associates, specializing in transportation and distribution management, at New York. The NYC will retain Mr. Reebie as a consultant.

Robert G. Flannery, general manager, Western District, Cleveland, transferred to the Eastern District, Syracuse, N. Y., succeeding **William T. Alexander, Jr.,** retired.

William J. McKnight appointed manager of research and administration, employee relations department. Mr. McKnight has held various positions in the personnel and labor relations department since 1940, when he joined the NYC.

Robert Brown and **Robert E. Swert** appointed directors of labor relations, New York. Mr. Brown was formerly assistant director of labor relations. Mr. Swert has been serving as deputy president, Brotherhood of Railroad Trainmen on special assignments.

Leo F. Battaglia, assistant general attorney, appointed to the new position of director of freight claims at New York. **Raymond J. Tiffany,** freight claim agent, Buffalo, N. Y., retired after nearly 48 years of service. Functions of the freight claim and claim prevention offices at Buffalo will be continued at that location, under jurisdiction of Mr. Battaglia.

Nicholas R. Cosentino, foreign freight sales manager, named assistant director of foreign freight sales, New York, and has been succeeded by **Frank P. Sherkus** (RA, Feb. 22, p. 75). **Grover B. Cheffins,** district freight sales manager, Lansing, Mich., appointed assistant freight sales manager, Detroit, and is succeeded by **Earl R. Standen. Spencer A. Rowan,** district freight salesman, Columbus, Ohio, promoted to district freight sales manager, Richmond, Va. **James F. Niffsinger,** freight agent, Alloy, W. Va., named district freight salesman, Charleston, **James P. Hutchins,** district freight salesman, Birmingham, Ala., appointed district freight sales manager, New Orleans, La.

John J. Brown, district storekeeper, dining & sleeping car department, New York, promoted to general storekeeper, Beech Grove, Ind., succeeding the late **John W. Hickey.**

Robert J. Slater, division engineer of track, Detroit, appointed assistant terminal superintendent, Elkhart, Ind.

George H. Mahoney, captain of police, Jackson, Mich., promoted to chief of police, Detroit, succeeding **Albert J. Faust,** transferred to New York.

Grant W. Quigley, district claim agent, Toledo, transferred to Indianapolis.

NORFOLK & WESTERN.—Myron B. Phipps, assistant president, retired May 1, but will continue as an N&W director. Before the merger of the Nickel Plate into the N&W last October, Mr. Phipps was president of the Nickel Plate.

William O. Robinson, sales manager, sales and service office, Detroit, Mich., appointed assistant traffic manager, Norfolk, succeeding **Clyde M. Francis,** who has retired after 47 years of railroading.

REA EXPRESS.—William J. Taylor, general counsel, appointed vice president and general counsel, New York.

Supply Trade

Kenneth V. Jewson, assistant to the sales manager, **Broderick & Bascom Rope Co.,** St. Louis, has been promoted to the newly created position of regional general manager.

John MacDonald has been elected to the newly established position of vice president, **Vapor Heating Limited,** of Canada. Mr. MacDonald was formerly manager of sales and maintenance.

Gordon A. Sinclair has been named staff assistant, public relations, **Electro-Motive Division, General Motors.** He was formerly public relations assistant for GM's **Delco-Remy Division.**

The **American Railway Car Institute** has moved from 230 Park Avenue to 11 East 44th Street, New York, N. Y. 10017.

Frank Youngwerth, chief signal engineer, **Erie Lackawanna,** Cleveland, Ohio, appointed assistant to the president, **Railroad Accessories Corp.,** Cresskill, N. J., succeeding **Paul Martin,** recently promoted to general manager, Cresskill Division.

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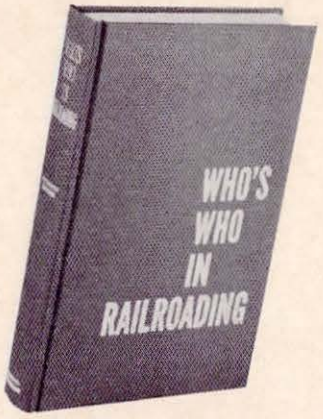

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Are new work rules helpful?

They have improved railroads' efficiency and hence have strengthened carriers' competitive position—More changes are needed.

A grass-roots report on results being obtained from the new working rules (page 10 in this issue) justifies the conclusion that, by and large, the rules are helping to bring about more efficient railroading. Respondents in the survey were railroad superintendents and their reports, of course, are based on first-hand experience.

Most superintendents responding to the survey are getting along with fewer men to man their crews, and with no adverse effect on safe operation (perhaps slightly the reverse). Most of them indicated that employee morale was unchanged—and more of them believed morale had improved than thought it had worsened.

The survey found 20% reporting that supervisory morale had improved. Most respondents believe further changes in working rules are needed to get optimum use of manpower. The areas in which need for improvement were seen to be greatest were: (1) present restrictions on interdivisional runs; (2) the distinction now made between road and yard service; and (3) the persistence of "full crew" laws.

Highly significant in the survey was the belief of many that the whole situation "pivots on the ability of the railroads and the unions to get together for orderly and equitable assimilation of technological change in the industry." Exactly. Modernization of working rules is not a negative step by railroads. It is not just a way to "save money," but rather to find the money that can be spent in ways that will increase the attractiveness and economy of railroad service.

There are many thousands of employees on the railroads' payrolls that are more, rather than less, secure in their jobs because of the changes in the working rules.

Everything railroads do to improve and economize their service helps them to compete for traffic they would otherwise lose. The more the competitive position of railroads improves, the more security there is for the great bulk of railroad employees. Radical changes have necessitated reductions in various places—in plant as well as employees. The only realistic course any business can follow is to make whatever changes competitive conditions make necessary.

Fortunately, the savings from elimination of wasteful practices provide some means whereby employees affected adversely can be given protection—such as gradual reduction in employment, generous severance pay, provision for retraining, and other measures to eliminate or reduce individual hardship. In this direction, railroads certainly have been generous—probably more so than any industry ever before has been, under similar circumstances.

But laying off people, no matter how necessary, is negative action if it is viewed alone. And it reflects the maturity of most railroad employees that their morale seems not to have suffered unduly.

The coal industry faced a crisis similar to that of the railroads, only much more drastic. The course of retrenchment it followed was far more severe than has been necessary in the case of railroads. But for both industries, there has been no choice—it's been a case of improving efficiency in order to survive.

Increased traffic, more jobs

The positive side of improved utilization of manpower on railroads has been inadequately emphasized. This positive side has been, and is, the improvement of the railroads' competitive position—to enable them to go forward in their bid for traffic, and to reach the point (soon, we may all hope) when increased business will turn the employment curve upward once more.

No great industry has pursued automation more thoroughly than the telephone business—but its employment is increasing, rather than decreasing, because of the great and continuous growth of telephone traffic. The sure cure for declining employment in any industry is for the industry to make itself so efficient that business growth will create more new jobs than efficient utilization of manpower can possibly eliminate.

This is a positive and constructive side of the efforts railroads are making to improve the efficiency of their operations. Railroads have not always emphasized the constructive side of changing work rules as much as they might have. Many employees still seem to think the purpose of changes is to take money out of their pockets and give it to railroad stockholders.

It isn't. It's like fishing. Some fishermen are out after fish just because they like to fish—whereas the justification for fishing is to get something to eat. In the work rules case too much discussion has centered on the rules themselves and probably not enough on what the purpose of the changes is. That purpose is to improve the competitive position of railroads—and, hence, the prosperity of everyone in the industry, including that of employees.

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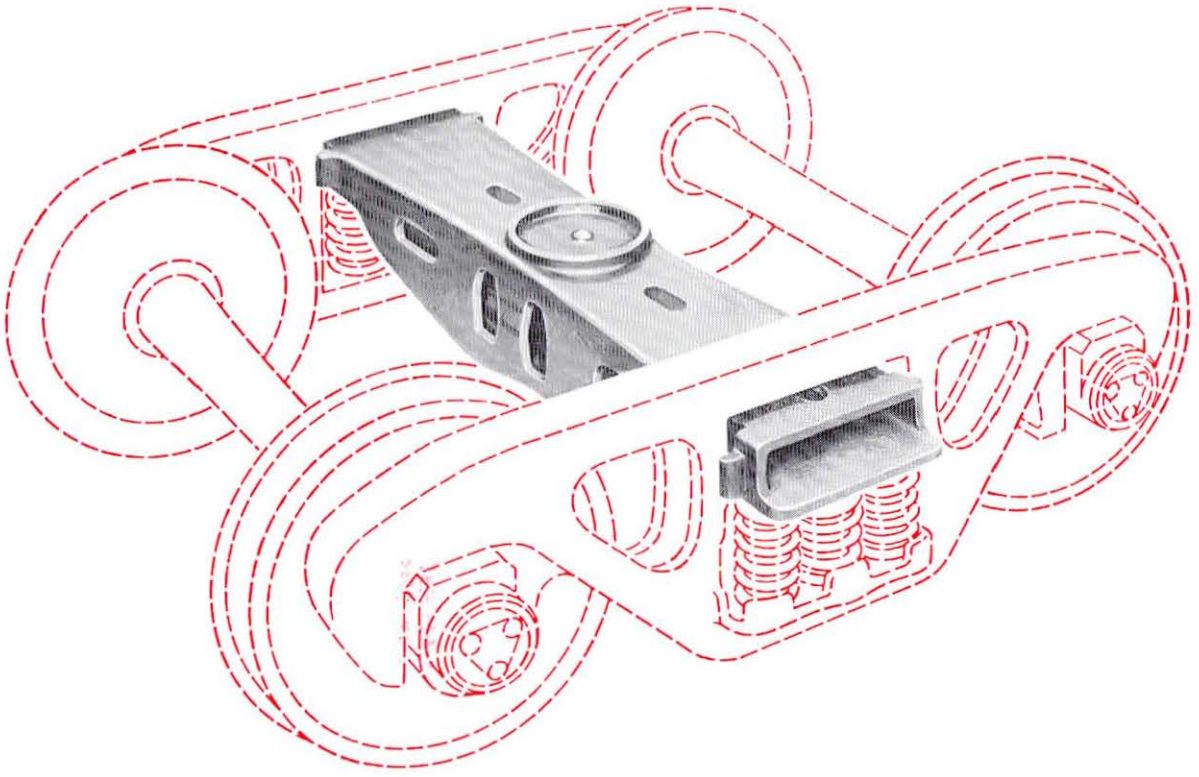

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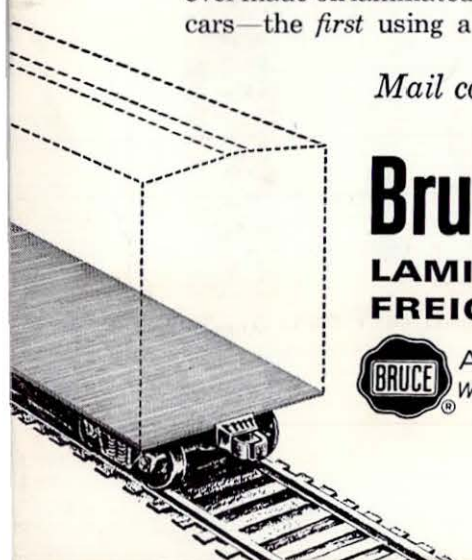

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